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Paper Industry Opposes Reciprocal Tariff Bill

Believes Such Arbitrary Power As Is Contemplated Should Not Be Intrusted to Any Individual or Group Without Provision for an Affected Industry to Be Heard—Taft Reciprocity Fiasco of 1911, When American Newsprint Industry Was Presented to Canada, Is Instanced—Paperboard Industry Also Opposed

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 2, 1934.—Warren B. Bullock, manager of the Import Committee of the American Paper Industry appeared before the Senate Finance Committee on Monday in opposition to the pending reciprocal tariff bill on behalf of S. L. Willson, president of the American Paper and Pulp Association and George W. Gair, of the National Paper Board Association.

Mr. Willson's statement was as follows:

Statement of American Paper Industry

As president of the American Paper and Pulp Association I am appearing for the paper industry of the United States in opposition to the bill under consideration, H. R. 8687.

The paper industry is opposed to this bill because it does not believe any such arbitrary power as is contemplated should be intrusted to any individual or group, without provisions for an affected industry to be heard on its own behalf.

Further, the paper industry is opposed to the repeal of the countervailing provisions of the existing Tariff Act. On the contrary, it believes these provisions should be extended to all commodities instead of being limited to the few products specifically mentioned in the Tariff Act of 1930.

The American paper industry ranks among the ten largest industries in the United States. It is as widely distributed as any major industry, for paper is made in significant quantities in thirty-seven states. It represents a billion and a half dollars of investment, and its normal product is valued at approximately one billion dollars per year. It now employs directly about 150,000 persons, and an additional 125,000 are employed in the industries converting paper into the numerous products for which it is used. Its employees represent a significant factor in the national economic field, inasmuch as paper mills are chiefly located in small communities, whose principal, if not sole, reliance is in the continued operation of the paper mills in those communities.

Mills Still Reporting Deficits

The paper industry has given its loyal support to the Recovery Act, in letter and spirit. As a result employment has increased, wages have been materially raised, and the workers are enjoying a happier condition than has been prevalent for years. Nevertheless, the paper mills are still reporting deficits and this applies to the major portion of the entire industry. They are not yet out of the woods financially. They are therefore loath to see legislation enacted that might, and probably would, immediately handicap their efforts to put American industry, including capital as well as labor, back on a secure and remunerative basis.

By reason of a long and honorable industrial history the paper industry feels it is particularly fitted to discuss such legislation as is now pending. The paper industry is one of the oldest in the United States. Its importance has been recognized from the very inception of our present Government, for the second Statute passed by Congress, after the Republic was established, involved the protection of this industry by the imposition of a tariff on "all writing, printing or wrapping paper, paper hangings and pasteboard."

Succeeding tariff acts have always included provisions as to paper. Legislation within the present generation placed newsprint and wood pulp on the free list. The terms of the bill under consideration eliminate these free list items from this discussion, so anything now being said is to be understood as referring to dutiable items, irrespective of what we may think of the wisdom of a free list status for some branches of the industry.

For Scientific Tariff Making

While the paper industry was always conservative in its attitude toward tariff legislation, it took a new advanced position when the Act of 1930 was being drawn. At that time, the American Paper and Pulp Association came out openly in favor of scientific tariff making. It advocated the imposition of duties sufficient and no more than sufficient to equalize the production costs here and abroad. There are nearly 170 grades of paper affected by the existing Tariff Act, and when the revision of the Act of 1922 was in progress four years ago, this industry, following its belief in a scientific tariff, asked for changes in only twenty-seven items, none of those being large increases, and each being based solely on facts.

(Continued on page 28)

To Open Bids for Government Paper May 21

Annual Supply for the Government Printing Office for the Fiscal Year Beginning July 1 Will Increase 43,000,000 Pounds—Bids Will Be Received for One Year and Six Months—Awards Will Be Made One Week After the Opening.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 2, 1934.—Bids will be opened by the Joint Congressional Committee on Printing on May 21 for the annual supply of paper and envelopes for the Government Printing Office for the fiscal year beginning July 1. Awards will be made one week later.

It is estimated that 43,000,000 pounds of paper will be needed for the year and and 41,897,000 envelopes.

NRA and Its Effect on Prices

The Committee on Paper Specifications made its report to the Joint Congressional Committee on Printing on Thursday of last week and for the first time special note was taken of the NRA and its effect on prices. Bids will be received for one year and for six months. The amounts asked for are on a yearly basis while the bids received for the half year will be on half the total amount.

The specifications committee consists of the following: F. P. Veitch, Bureau of Chemistry, chairman; B. W. Scribner, Paper Section, Bureau of Standards; Arthur H. Smith, Veterans Administration; E. E. Emerson, Purchasing Agent, Government Printing Office; William H. Kervin, traffic manager, Government Printing Office; M. S. Kantrowitz, acting technical director, Government Printing Office; James M. Carthcart, paper inspector, Government Printing Office; and Ansel Wold, clerk, Joint Committee on Printing.

Specifications Committee Report

The report of the specifications committee to the Joint Committee is as follows:

The Committee on Paper Specifications respectfully submits its Twenty-sixth Report and the accompanying recommended schedule for paper for the public printing and binding and blank paper for the use of the Government departments and establishments in the District of Columbia for the term of 6 months or 1 year, beginning July 1, 1934.

The changes recommended are as follows:

Paragraph 65, Wooden Cases.—This paragraph formerly required that all paper, unless ordered in rolls or otherwise specified, must be packed in tight wooden cases. It has been modified so as to permit the Public Printer to order in cartons or on skids any of the case paper covered by the schedule which may be satisfactorily handled when packed in this manner and that the contract price be modified in accordance with the differential in the cost of packing as fixed by the respective code authority and in effect at the time of shipment.

Paragraph 66, Weight, Banding, and Marking.—So much of this paragraph as relates to banding full width has been modified to exclude 100 percent Rag Chart Paper as this requirement is specifically covered in the text of the item.

Paragraph 91 which requires compliance with the National Industrial Recovery Act will be made a part of the contract and reads as follows: "The contract will also provide that the contractor shall comply with each approved code of fair competition to which he is subject, and if he is engaged in any trade or industry for which there is no approved code of fair competition, then as to such trade or industry with an agreement with the President under section 4 (*a*) of the National Industrial Recovery Act (President's Reemployment Agreement), and the United States shall have the right to cancel this contract for failure to comply with this provision and make open-market purchases or have the work called for by this contract otherwise performed at the expense of the contractor, and the contractor shall not accept or purchase for the performance of this contract or purchase order or enter into any subcontracts for any articles, materials, or supplies, in whole or in part produced or furnished by any person who shall not have certified that he is complying with and will continue to comply with each code of fair competition which relates to such articles, materials, or supplies, and/or in case there is no approved code for the whole or any portion thereof then to that extent with an agreement with the President as aforesaid."

Inasmuch as the prices filed with the Paper Industry Authority establishes higher prices for lightweight papers, it has been found necessary to provide for separate bids for such papers under Lots Nos. 14, 22, 23, 62, 70, and 123.

Since the Paper Industry Authority permits an additional charge for wrapping in bundles of less than 100 pounds, the requirement for wrapping a specified number of sheets to the bundle has been removed from the Schedule of Papers and Board.

The specifications for Binder's Board have been slightly modified to bring them in closer agreement with commercial practice.

This schedule embraces 184 lots, being the same number called for in the preceding schedule. The quantity estimated for the term of one year beginning July 1, 1934, is approximately 43,000,000 pounds, as compared with 12,780,000 pounds for the previous contract period of 3 months.

Estimated Quantities of Paper

Following are the estimated quantities for one year or one half this quantity for six months:

3,000,000	pounds newsprint paper.
7,595,000	pounds machine-finish book paper.
125,000	pounds antique book paper.
180,000	pounds lightweight machine-finish book paper.
380,000	pounds 50 per cent rag machine-finish book paper.
40,000	pounds 75 per cent rag laid antique book paper.
40,000	pounds 100 per cent rag machine-finish book paper.
2,350,000	pounds super-calendered book paper.
80,000	pounds half-tone book paper.
260,000	pounds coated book paper.
50,000	pounds lithograph paper.
2,420,000	pounds mimeograph paper.
700,000	pounds U S M O safety writing paper.
16,000	pounds U S M O writing paper.
12,000	pounds safety writing paper.
4,020,000	pounds writing paper.
500,000	pounds map paper.
831,000	pounds manifold paper.
4,750,000	pounds bond paper.

943,000 pounds ledger paper.
550,000 pounds index paper.
5,000 pounds tissue paper.
255,000 pounds cover paper.
470,000 pounds manila paper.
856,000 pounds kraft paper.
170,000 pounds manila tag board.
1,650,000 pounds calendered tag board.
30,000 pounds manila cardboard.
73,000 sheets railroad board.
685,000 pounds bristol board.
8,000,000 pounds United States postal card bristol board.
2,000 pounds pariffin paper.
10,000 sheets gummed paper.
139,000 pounds blotting paper.
5,000 pounds stereotype molding paper.
30,000 pounds oiled manila tympan paper.
4,000 pounds plate-wiping paper.
4,000 pounds back-lining paper, for case making.
30,000 pounds high finish red sulphite.
35,000 sheets pressboard.
3,000 pounds news board.
780,000 pounds chip and strawboard.
25,000 pounds marble grained board.
36,000 pounds box board.
790,000 pounds binder's board.

Report on Envelopes

The following report was made on plain envelopes:

The Committee on Paper Specifications respectfully submits its Eleventh Report and the accompanying recommended schedule for plain envelopes in common use by two or more departments, establishments, or services of the Government in the District of Columbia for the term of six months or one year beginning July 1, 1934.

Paragraph 65 which requires compliance with National Industrial Recovery Act will be made a part of the contract and reads as follows:

Compliance with National Industrial Recovery Act

The contract will also provide that the contractor shall comply with each approved code of fair competition to which he is subject, and if he is engaged in any trade or industry for which there is no approved code of fair competition, then as to such trade or industry with an agreement with the President under Section 4 (*a*) of the National Industrial Recovery Act (President's Reemployment Agreement), and the United States shall have the right to cancel this contract for failure to comply with this provision and make open-market purchases or have the work called for by this contract otherwise performed at the expense of the contractor, and the contractor shall not accept or purchase for the performance of this contract or purchase order or enter into any subcontracts for any articles, materials, or supplies, in whole or in part produced or furnished by any person who shall not have certified that he is complying with and will continue to comply with each code of fair competition which relates to such articles, materials, or supplies, and/or in case there is no approved code for the whole or any portion thereof then to that extent with an agreement with the President as aforesaid.

This schedule embraces 76 lots, which is the same number as called for in the previous schedule. The estimated quantity for the term of one year beginning July 1, 1934, is 41,897,000 as compared with 17,437,000 for the previous contract term of three months.

The committee is asking bids for the following for a full year or for half for the six months period:

29,795,000 kraft.
10,235,000 writing, sulphite, white and colored.
175,000 fine writing, white and colored.
415,000 ledger, white.
1,105,000 bond, 50 per cent rag, white.
172,000 bond, 100 per cent rag, white.

Hawley Pulp & Paper Co. Plan

PORTLAND, Ore., April 28, 1934.—Hawley Pulp and Paper Company has made public the plan which is drafted to prevent receivership of the Hawley interests and to put the company on a paying basis while negotiating within the provisions of the securities act of 1933. The committee which formulated the program of rehabilitation included Isaac D. Hunt and E. S. Collins, representing bondholders; W. Lair Thompson, representing the noteholder; A. S. Kerry, Seattle, representing stockholders and Watson Eastman, representing the management.

Retrenchment plans were projected when it became evident that the company could not meet semi-annual interest due July 1, 1933, on its first mortgage 6 per cent sinking fund gold bonds, a financial reorganization was decided upon. The committee recommended the following methods of reorganization:

The plan provides for all available funds being disbursed to bondholders until the bonds are retired except as provided otherwise. This, it was said, will be accomplished by using annually the first $279,404.47 (the 1932 depreciation charges) for the purchase of bonds after advertising for offers. Funds exceeding this amount to be disbursed to bondholders until 4 per cent per annum has been distributed. Funds above this amount to be used for the payment of interest on the note until 3 per cent per annum has been distributed. Funds above this requirement to be used for the purchase of bonds and retirement of the note in the ratio of 81 per cent par value of bonds and 19 per cent par value of note, until $1,000,000 par value of bonds shall have been retired when such available funds shall be used, first for payment of bond interest; second payment of note interest and third for purchase and retirement of bonds and note principal on a pro rata basis according to the par value of outstanding bonds and note principal on a pro rata basis, according to the par value of outstanding bonds and unpaid par value of the note. After retirement of bonds and note, dividends shall be paid on first preferred stock and upon payment of all cumulative dividends thereon the plan will terminate.

Bathurst Reports Strong Position

The annual report of the Bathurst Power and Paper Company for 1933 shows the maintenance of a strong liquid position and a substantial reduction in operating loss. Gross profits for the year were $59,475. Expenses totalled $150,365, and after taking into account an operating loss of $1,094 by a subsidiary, there was an operating loss by Bathurst Power and Paper Company Ltd. of $91,184, against an operating loss in 1932 of $158,224. Income from investments totalled $76,726, reducing the loss to $15,258, which compares with $131,613 in 1932, when, however, an amount of $5,999 was written-off for bad debts, and $3,163 represented loss on sale of investments. Previous deficit, as adjusted, was brought forward at $230,675, leaving a net deficit of $245,933 to be carried forward. In his report to shareholders, President White points out that in 1933 sales of newsprint were the lowest of any calendar year since the company was organized and the cost of production substantially in excess of the prevailing market price. He adds: "The immediate business outlook appears to be more encouraging, and if general conditions continue to improve, there is reason to hope that the company will be able to present a better operating statement at the end of the current year."

Marathon to Establish New Plant at Wausau

Negotiations With City Council Completed to Take Over Idle Factory, Which Will Probably be Converted Into Carton Unit for Manufacturing Paper Containers—Paper From Main Mill, at Rothschild, Wis., Will be Utilized in New Unit

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., April 30, 1934—Establishment of another converting plant by the Marathon Paper Mills Company, Rothschild, Wis., was announced last week. Negotiations have been completed to take over a factory building at Wausau, Wis., formerly owned and occupied by the Marathon Shoe Company. The building has been idle for some time, and although said to be appraised at $100,000 was bought by the city of Wausau for $31,000.

The city council turned the building over to the Marathon Paper Mills Company under an agreement which stipulates that the company establish a manufacturing unit there employing not less than 100 persons annually. If this agreement is met, the city will deed the property to the paper mill company July 1, 1940. The city has made one payment of $5,000 on the deal and will pay the remainder on or before June 1. The paper company will assume all taxes and assessments from the time of occupancy.

Although no definite announcement has been made as to the type of converting plant to be established, it is reported that it will be a carton unit making paper containers. D. Clark Everest, vice president and general manager of the company, was in New York last week making definite plans for the new plant and arranging for the purchase of machinery.

It will probably be two or three months before the plant is ready to operate, since shoe machinery now in the building must be dismantled and stored, alterations must be made and the paper converting machinery installed.

With the addition of this plant, the Marathon company will be operating six branches in addition to its Rothschild mill. Its converting plants are at Ashland and Menasha, Wis., and now at Wausau. The company also owns a pulp mill at Merrill, Wis., and a saw mill at Ironwood, Mich., which it hopes to operate next fall. The total number of employees upon completion of this expansion is estimated at 2,500.

March Employment and Wages Higher

Employment and wages in Wisconsin were higher in March of this year than at any time since the summer of 1931, according to compilations for the paper industry and other manufacturing plants by the Wisconsin Industrial Commission. Pay rolls increased 6.4 per cent between February 15 and March 15, marking, with one exception, the most precipitous increase over that period in the fourteen years the commission has been compiling records. Weekly earnings averaged $18.45 this March, compared with $13.24 a year ago and $17.47 in 1932.

In March, 1934, factory employment for the entire state stood at an index of 79.3 in comparison with the level of 1925-26-27. For seven consecutive months up to October 15, 1933, there was a steady advance, and from then until January 15, 1934, factory employment and pay rolls declined. Since January of this year there has again been a strong rise. The weekly average earnings of $18.45 are higher than for any month since August, 1931.

Allis-Chalmers Bookings Expand

Figures after debenture interest and depreciation indicate that the Allis-Chalmers Manufacturing Company, Milwaukee, Wis., had a net loss of $677,153 for the first quarter of 1934, compared with net loss of $869,986 for the like period in 1933. Operating loss the first quarter was $324,226, against $512,973 a year previous. Billings totalled $3,298,382, compared with $2,691,992.

During the quarter total bookings amounted to $4,597,656, contrasted with $1,720,565 the same quarter of 1933, a gain of 167 per cent.

Unfilled orders March 31 aggregated $7,725,271, compared with $6,425,998 Dec. 31, 1933, an increase of $1,299,273.

The March 31 balance sheet showed cash and marketable securities of $5,818,335 and net current assets of $22,993,507. On the same date a year ago, the cash and marketable securities amounted to $4,935,958 and net current assets to $24,750,597.

News of the Industry

A patent for perfecting a washable wall paper has been awarded to Louis C. Fleck, an employee of the Kimberly-Clark Corporation, at Appleton, Wis. Three claims of originality and improvement, all of which were held by department examiners, served as the basis for official recognition of the invention. Mr. Fleck has assigned commercial rights on the invention to the Paper Patents Company, Neenah, Wis., a subsidiary of the Kimberly-Clark Corporation. The patent has been pending since May 31, 1933.

With forest fires cropping out in the timber sections of Northern Wisconsin, steps are being taken to reduce the amount of losses this year. A plan has been proposed to counties by the Wisconsin Conservation Commission providing for the appointment of enough patrolmen during hazardous periods to protect each area well. The system was tried out in Vilas and Iron counties, two of the heaviest wooded sections, last year. Their part of the $325,527 spent for fighting fires in 1933 was very small, although the number of fires detected and extinguished was large. The plan is estimated to save more than a quarter million dollars.

Assurance has been given the city of Menasha, Wis., by the district office of the War Department at Milwaukee that a permit will be granted for dredging operations in lower Little Lake Butte des Morts to remove an offensive accumulation of mill waste. Plans for the dredging have been completed. The shore line will be filled in to prevent future accumulations of this nature.

Cell-O-San Corp. Formed

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., April 30, 1934—A new concern to be known as the Cell-O-San Corporation has been incorporated under the state laws to carry on business in sanitary paper and other products, according to a document filed here this week. The directors are Lawrence Sochia, Fred L. Smith and W. O. Adner, all of this place. The capital stock is placed at $20,000 and is divided into 200 shares with a par value of $100 each. It is understood that the company plans to start business immediately and the charter rights are perpetual.

Hinde & Dauch Paper Co. of Canada's Earnings

In Last Fiscal Year, Ending December 31, 1933, Company Earned 26 Cents Per Share on Common Stock, After Provision for Bond Interest, Etc.—Greater Tonnage of Paper Board Produced in First Quarter of 1934 Than in First Quarter of 1933

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, April 30, 1934.—Hinde & Dauche Paper Company, of Canada, with chief plant at Toronto, produced greater tonnage in the first quarter of 1934 than in the corresponding quarter of 1933, but prospects for the remainder of the year are not as hopeful as was the case at this time last year. There is a possibility that demand from the breweries may show some falling off with the advent of sale of beer by the glass in Ontario, since wooden containers may come into more general use, especially for beer used by hotels and restaurants. Price of liner board will probably remain unchanged in the immediate future and there is no indication that there will be an increase in the current year.

In the last fiscal year, ended December 31, 1933, the company showed marked improvement in earnings over 1932 and after provision for bond interest, depreciation and income tax earned 26 cents per share on the 299,933 shares of common stock outstanding. Nothing was earned on the common in 1932 and 1931 and in the latter year the company had an operating deficit of $33,771. Late in 1932 the company commenced the manufacture of paper board, and this proved profitable during 1933, and was a decided factor in the satisfactory earnings record of that year.

While loss of some of the brewery business may prove a temporary setback, the company is manufacturing an ever-increasing variety of cartons and containers for numerous manufacturers as well as manufacturing line board, straw board, etc. Business is directly affected by any change in retail trade and can be expected to increase in volume as retail trade improves. The comparatively low price of liner board for the past three years has been a deterrent to high earnings, but despite this the company has been able to show a profit and improve liquid position during a period when many other manufacturers have sustained losses.

Superintendents Coming To Cornwall

Considerable interest is being manifested in the forthcoming spring meeting of the Northern New York Section of the American Pulp and Paper Superintendents' Association, which will be held in Cornwall, Ont., on May 18 and 19. A very interesting program is being arranged and will include visits to Courtauld's rayon plant and the Howard Smith Paper Mills. Special papers on white water control and sizing are being prepared. An invitation has also been received from Provincial Paper Ltd., to visit their plant at Mille Roches. This is the first time the American superintendents' meeting has ever been held in Canada. The chairman of the Northern Section is B. D. Millidge, manager of the Cornwall Division of Howard Smith Paper Mills. Mr. Millidge is in general charge of arrangements and hopes to see a large number of the Canadian paper makers in attendance. Cornwall has a fine modern hotel and there are many means of recreation.

To Commence Big New Factory

Canadian Industries Ltd., manufacturers of cellophane and other products, will commence excavation work on its million dollar salt and alkali plant at Cornwall, Ont., early in May, according to an announcement made by officials this week. The actual cost of the plant is estimated at $900,000, while an additional $300,000 will be spent for equipment. It is expected that the building will be completed within three months' time, and that the factory will commence production by fall. The Fraser-Brace Company, Montreal, has the contract for the erection of the plant.

Pulpwood Exports To Be Revived

According to word from St. John's, Newfoundland, Newfoundland's now Commission Government is considering a plan for large-scale pulpwood operations, not only on the island, but in the hinterland of Labrador. This was stated this week in an official statement noting reversal of the former policy, whereby export of raw wood was forbidden except in special circumstances. It is estimated that 500 men will be employed in Newfoundland and 400 in Labrador at commencement of operations, and hopes are expressed that eventually 1,000 would be at work in Labrador. Markets for pulpwood are expected to be found in England and possibly France.

Notes and Jottings of the Trade

Ernest Rossiter,, president and general manager of St. Lawrence Paper Mills Ltd., has resigned from office in the company and its subsidiaries. He resigned from St. Lawrence Corporation, which was formerly the holding company for St. Lawrence Paper, Brompton Pulp and Paper, and Lake St. John Power and Paper Company last year. Mr. Rossiter has been connected with the newsprint industry for many years. He was instrumental in organizing the St. Lawrence Paper Mills.

The recent extension of University Avenue in Toronto has made it necessary to change the numbering and this affects several of the Toronto paper firms. The Provincial Paper Companys' building becomes No. 388, instead of 74. This change includes Interlake Tissue Mills, Don Valley Paper Company, and Valleyfield Coated Paper Company, all of whose offices are in the Provincial building. A little higher up the Avenue, now 408, is the head office of the Abitibi Power and Paper Company.

A very effective new line of napkins known as "Tint Embossed," is being put on the market by Interlake Tissue Mills, Thorold, Ont. It shows a delicate lace effect on a tinted background. The lace design is in several patterns, and the background is in pale green, pink and canary shades. These have an artistic appearance and will find many uses in table service in addition to that of napkins.

Officers of Provincial Paper Ltd., at the annual meeting of the company in Toronto a few days ago, were elected as follows: President, S. F. Duncan; vice-president, T. A. Weldon; secretary-treasurer, Walter S. Barber; directors, Mr. Duncan, Mr. Weldon, W. H. Smith, George Challes, G. T. Clarkson, L. R. Wilson, A. F. White, E. R. Wood and T. Broadhurst.

The pulp mill hall of the Dryden Paper Company, Dryden, Ont., was destroyed by fire recently in a blaze that caused a loss of $18,000 to several occupants of the building.

Demand for Paper Moderately Active in Boston

Some Improvement Noticed by Fine Paper Distributors—Wrapping Paper Merchants Report Fair Volume of Sales—Tissue Specialties in Good Request—Box Board Market Displays Stronger Trend—Paper Stock Section Comparatively Quiet

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., April 30, 1934.—The paper market was fair on the average during the last week. A canvass of the trade brought varying replies as to the condition of trade, but many were "fairly good" and a few "pretty good." A few statements were unfavorable and a few highly encouraging. The situation in regard to prices is apparently well stabilized in both fine and wrapping paper. The codes, at least in some cases, are apparently working out well. Mill prices are fairly steady. Some dealers in fine paper noted an improvement. The majority of wrapping paper merchants reported a fair volume of sales. Mill representatives, handling specialties in tissues, such as napkins and toilets, report a good business, but some uncertainty in regard to prices.

The box board market is mulling along, with possibly indications of improvement here and there. Road salesmen note that box business is improving in the western part of the State.

A few grades of paper stock moved well, but the market for the most part was comparatively quiet, a number of lines showing a downward tendency. Mixed papers, old newspapers and corrugated boxes found ready markets, with prices sustained. No. 1 mixed papers continued at .20 @ .25, old newspapers at .35 @ .40 and corrugated boxes at .35 @ .40. Several grades of old paper eased off. No. 1 hard white shavings, for which there was little demand, went down to 2.20 @ 2.35 from 2.40; mixed ledgers to .95 @ 1.05 from 1.00 @ 1.10; No. 1 old manila to .75 @ .80 from .95 @ 1.05; manila to .70 @ .75 from .75 @ .80; and overissue news to .50 @ .55 from .55 @ .60. Most grades of bagging remained at the same levels. Foreign gunny No. 1, however, moved up five points to 1.55, but domestic gunny No. 1 declined five points on the high side of the range, going down to 1.20 @ 1.25 from 1.20 @ 1.30. Bagging No. 2 stepped up to .50 @ .55 from .40 @ .50. Quotations on new domestic rags remained unchanged. In old domestic rags the No. 1 and No. 3 grades of roofing stock showed an easier tendency, but the No. 2 grade held. Few transactions took place in foreign rags, due to the unaltered situation of exchange. Old linsey garments declined to 1.25 @ 1.35 from 1.40 @ 1.50.

Distributors Price Reporting Plan

The executive secretary, Frank B. Cummings, of the Code Authority for the Paper Distributing Trade of New England, Central and Northern New York, Regional Committee No. 1, mailed on Thursday to the entire list of the paper distributing trade in all the New England trading areas an order covering items of fine paper and another order covering items of wrapping paper. The order, designated as Order No. 1, is issued by Charles A. Esty, chairman of Regional Committee No. 1 and a member of the Code Authority. Accompanying the order is a letter containing the following: "Members of the Paper Distributing Trade will take notice that the Price Reporting Plan referred to therein is now in effect."

The order contains instructions in regard to the Price Reporting Plan.

The order to the fine paper trade includes Appendix A, which lists fine paper commodities approved by Code Authority at their February, 1934, meeting in New York City; and Appendix B, which lists uniform terms and conditions of sale, discounts, trade allowances, special charges and trade customs as recognized and applicable in the New England Trading Areas, and that to the wrapping paper trade, Appendix A and Appendix B, containing lists which apply to that division.

Blanks to be used in filing prices were sent with the order.

News of the Trade

Dan S. Hickey, of the NRA, gave the salesmen of the D. F. Munroe Company a talk on the "Problems of Selling Today" at a meeting Saturday morning.

At a sales meeting of the Andrews Paper Company Saturday morning, Jack Leo, manager of towel sales for the United States for the Brown Company, Portland, Me., and J. L. Boynton, manager of towel sales for New England for the same company, from the Boston office, gave talks.

Roger Fuller, Eastern sales representative of the Gilbert Paper Company, Menasha, Wis., will be with the Andrews Paper Company a number of days this week on promotional work.

Trade customs were discussed at a sales meeting of Storrs & Bement Company Saturday morning. John H. Brewer, general manager, presided.

The regular sales meeting of Knight, Allen & Clark, Inc., was held at the office of the company Saturday morning.

Charles A. Esty, of Carter Rice Corp., chairman of Regional Committee No. 1 and member of the Code Authority, left for Chicago, Wednesday, in connection with Code work.

Col. Edgar Smalley, managing director of Edwin Butterworth & Co. Ltd., Manchester, Eng., is expected to visit the Boston branch of the paper stock concern early in May.

The annual outing of the Boston Paper Trade Association is to be held June 11 at the Charles River Country Club, Newton, Mass.

Philip R. Allen, Mrs. Allen, and their daughter, Miss Nancy Allen, are expected to return to Walpole today from their motor trip which resulted, a few days ago, in an automobile accident near Charlottesville, Va., in which Mrs. Allen was injured. Mr. Allen is president of Bird & Son, Inc., Walpole.

Cushnoc Paper Mill Operating

[FROM OUR REGULAR CORRESPONDENT]

AUGUSTA, Me., April 28, 1934.—The Cushnoc Paper Co. has reopened its mill and will continue to run for several weeks, it has been announced by officials of the Maine Seaboard Co., who are operating the mill on a lease. The reopening of the mill returns 225 men to work.

Officials could not say how long the mill could run, but did indicate it would continue in operation for several weeks. After that, they said, it depended on the general set-up of the newsprint business.

The mill is running full time shifts, five days a week.

Chicago Paper Market Conditions Irregular

Demand for Fine Papers Fairly Active, With Trend Improving—Cover Papers in Better Request Than of Late—Kraft Paper Specialties Stronger—Newsprint Situation More Hopeful—Ground Wood Papers Comparatively Inactive

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., April 30, 1934—Chicago paper firms are thinking and talking about the possible acceptance on the part of Administration code authorities of the newly revised general paper code which, if accepted, would include fair trade practices within the actual confines of the code and also eliminate many subordinate groups. As far as the market itself is concerned, activity was not so pronounced this week as last. It is evident, as reports are accumulated, that houses specializing in quality paper are finding a much better go of it under code provisions than before, with the price situation somewhat of less importance. This situation also creates a spotty condition marketwise, which, at times, is quite pronounced.

Within the market itself kraft retained the full measure of its strength. Book markets seem a bit harder hit at this time, the reason being entirely within the industry itself. Covers are improving. Fine papers had a fair week with tone improving. Kraft specialties showed some betterment. The board market was about the same. The ground woods were still comparatively inactive, while the newsprint situation was reported hopeful but still basically unimproved. Waste papers moved in a narrow range through the week.

Chicago Paper Association Meets

A number of out-of-town guests were present to enliven the regular meeting of the Chicago Paper Association, held at the Blackstone Hotel, Chicago, April 24. Included in the group were R. W. Miller, Central Ohio Paper Company, Columbus, Ohio; Al House, Union Paper and Twine Company, Detroit; C. C. Kettles, C. F. Hubbs Company, New York City; Harry Newton, American Paper Company, Milwaukee; and Corwin Roach, Capitol Paper Company, Springfield, Ill. Mr. Miller made a splendid talk, giving the results of his travels throughout the country since January 1 on the subject of code provisions. Mr. Miller pointed out that jobbers in all parts of the country, irrespective of location, had many common problems which must be solved, including competition with irresponsible vendors of their products. The association, under the chairmanship of William Chukerman, vice-president, then discussed the main issue, that of competition from small peddlers with no permanent stock who were undermining the business of legitimate jobbers. Ways and means of controlling such competition, through licensing and stopping their source of supply, were fully discussed. During the session the association also voted to oppose the State Industrial Recovery Act now before the Illinois Legislature and asked the executive officers to advise Senators and Representatives of their stand in the matter. The bill was considered a menace to states rights by many of the members present and decidedly unfavorable to business units who would, if the bill passed, be under the policing and regulatory powers of state politicians.

Paper Salesmen's Activities

The committee on Fair Trade Practices of the Middle Western Division, Salesmen's Association of the Paper Industry, is marking time at the present, according to Harold Knott, chairman of this important committee, pending the outcome of the new revised paper code now before code authorities of the Administration. The outcome of Administration examination of the revised code of the general industry, which would, if adopted, include trade practices and customs within the code itself as well as eliminate most of the subordinate divisions, would, of course, make some difference in the procedure of the local committee. The association is active in making plans but more or less inactive in carrying them out pending the decision as outlined above. Meanwhile, the association, through Dick Cook, of International Paper Company, chairman of the golf committee, has outlined a summer schedule which will take the salesmen and their guests to six outstanding golf courses of the Chicago district. Getting under way May 25 with an outing at the Exmoor Country Club, the schedule calls for successive monthly appearances at Chicago Golf, Bob o' Link, Knollwood, Skokie and one other course, not yet selected, to harbor the final annual outing in October at the time of the NPTA meetings here. The SAPI seems to do everything up in style, at least with that golfing layout they are making a real start at that classification.

Annual Newsprint Race

The *Chicago Tribune* is giving publicity to the annual "newsprint race" which at least educates the public to the fact that newspapers have a source—which is newsprint. Four vessels of the *Tribune's* newsprint fleet are now engaged in a race for the honor of delivering the first cargo of 1934. The four ships are running even and providing a stirring race, under weather handicaps, which is worthy of the racing section of any sports page. The newsprint is coming from Canadian sources maintained by the *Tribune.*

News of the Trade

Four well known paper mills, with sales offices in Chicago, have moved to the top floor of the Conway building, tripling their floor space and, in general, getting themselves ready for better days to come. The four are the Marathon Paper Mills; Menasha Products Company; Tomahawk Kraft Paper Company; and Flambeau Paper Company, and all but one, Menasha, participated in a wholesale move from the eleventh floor of the big building on Washington street.

A feature of the new location is the Masonite ceiling which is reported to deaden all noises, through absorption, by as much as eight per cent. A demonstration of this sound effect, with Jim Coy doing the shouting, was very effective. Might be a fine place for the Salesmen's Association to hold choir practice—after hours, of course.

The Pilcher-Hamilton-Daily Company also got back to its old home at 349 N. Dearborn street, after an absence of several years. When the company moved it found the executive offices all rearranged and much welcome additional floor space for storage purposes.

An interesting mailing comes from the Swigart Paper Company this week involving Gold-Stripe Superfine Enamel; Champion Garamond Text; Purple-Crest Eggshell; Purple Crest Uncoated Railroad and Purple Crest Folding Enamel—all products of the Champion Coated Paper Company and of the Swigart "Gold-Stripe" series. A complete price list, with descriptions, is attached to the impressive mailing.

Canadian Pulp and Paper Business Improving

Dominion Bureau of Statistics Reports Value of Exports During March Reached $11,614,680, Compared With $7,607,594 for Corresponding Month Last Year, an Increase of $4,007,086—Newsprint Paper Exports Register Largest Gain

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., May 1, 1934—That the pulp and paper business is definitely on the upturn is the only deduction to be drawn from the return of the exports of pulp and paper for March, just made public by the Dominion Bureau of Statistics. This shows that the total value of the exports of pulp and paper, together with pulpwood reached a total of $11,614,680 for the month, as compared with $7,607,594 for the corresponding month of 1933, an increase of no less than $4,007,086. The largest increase in value was in the case of newsprint, of which the exports were 4,788,853 cwt., valued at $8,095,031, as compared with 2,638,386 cwt. valued at $4,396,700 in February, and 2,760,105 cwt., valued at $5,403,954 in March, 1933. The total exports of wood pulp and screenings amounted to 1,250,735 cwt., valued at $2,640,198, as compared with 891,525 cwt., valued at $1,812,637 in March, 1933. Of this the largest value was represented by bleached sulphite, of which 576,606 cwt. valued at $1,533,141 was exported, this comparing with 539,817 cwt., valued at $1,235,314 in March, 1933. Total pulpwood exported for the month was 45,695 cords, valued at $264,819, as compared with 23,194 cords, valued at $154,861 in March, 1933.

Swedish Pulp and Paper Trade

A report has been received here from the Swedish Board of Trade reviewing the trade of Sweden for 1933. In respect to the pulp and paper industry the report says: "With regard to the paper and graphic industries a further improvement could be noted sometimes with strikingly favourable figures. The production of paper pulp for the year just ended has been entirely cleared, and the quantity sold for the new year is greater than for last year. The uncertain currency conditions are however a restraining factor. On the other hand the paper market has not been so lively at the turn of the year the situation appeared however comparatively favourable in comparison with the preceding year. During the quarter the water shortage in several places has hampered the activities of the paper mills. The book-binderies and the printing works have experienced a considerable improvement."

First Place in Newsprint Exports to China

B. A. Macdonald, Assistant Trade Commissioner for Canada in China, reports that while the total value of China's imports of paper and wood pulp decreased from 37 million gold units in 1932 to 29 million gold units in 1933, the volume of most of the items actually increased.

He proceeds:

"The paper trade is one of those which holds out the greatest future for Canada in the China market, but unfortunately figures covering imports from the Dominion alone are available at time of writing only in the case of newsprint. Of the newsprint imports, Canada's share rose from 139,000 piculs valued at 833,000 gold units, or roughly 15 per cent (9,300 tons valued at roughly Canadian $330-000), in 1932 to 310,000 piculs valued at 1,511,000 gold units (20,600 tons valued at Canadian $786,000) in 1933. This increase of 120 per cent has placed Canada in first place among China's suppliers of newsprint, whereas up until 1932 imports from the Dominion were negligible.

"Imports of newsprint from the other principal supplying countries during 1933 were as follows, in thousands of piculs: Total imports, 1,096: Canada, 310; Japan, 190; Finland, 124; Sweden, 118; Norway, 111; Germany, 79; United States, 66; Austria, 56.

"Some of the leading Chinese newspapers are now being supplied entirely with Canadian paper, and the slowly increasing literacy and growing interest in national and world affairs promises steadily larger circulations in the future."

St. Lawrence Mills Speed Output

The improvement in the outlook for newsprint was commented on at the annual meeting of the St. Lawrence Corporation, held here last Thursday. The chairman, A. K. Cameron, said there had been a notable gain in consumption and production although there had thus far been no betterment in price.

It is reported that last week two more newsprint machines at the St. Lawrence mills were placed in operation bringing the current output up to 400 tons daily, using four of the six machines installed at Three Rivers. The working shifts have been increased from six to eight hours.

At a special meeting shareholders approved a by-law reducing the number of directors from fifteen to a number not exceeding ten and to be not less than seven. This action was taken because of the change whereby the management of the controlled companies, namely St. Lawrence Paper Mills, Lake St. John Power and Paper and Brompton, was divorced from the St. Lawrence Corporation. It will be recalled that a year ago the management of Lake St. John was assumed by the bondholders' committee and it was decided at that time to allow management of the other units to revert to the individual companies. Under these circumstances a smaller board, and in turn a reduction in expenses, was deemed ample and advisable for the holding company. Directors of the corporation were elected as follows: A. K. Cameron, A. F. White, Arthur H. Campbell, George R. Cottrelle, H. C. Flood, H. H. Horsfall, J. I. Rankin, Hon. Gordon W. Scott, R. W. Steele and N. A. Timmins. Mr. Timmins was named chairman, Mr. Cameron president and Mr. White vice-president.

At the annual meeting of shareholders of St. Lawrence Paper Mills A. K. Cameron was elected chairman of the board; N. A. Timmins president in succession to Ernest Rossiter, and A. F. White vice-president and managing director. Other directors elected were H. C. Flood, R. W. Steele, J. I. Rankin and Arthur H. Campbell.

New Morris Machine Works Booklet

Morris Double Suction Horizontally Split Centrifugal Pumps are concisely described and illustrated in a new and attractive bulletin published by the Morris Machine Works, of Baldwinsville, N. Y.

The booklet contains numerous illustrations of installations in important industrial plants, including the installation of a number of motor-driven Morris Double-Suction Pumps in the main pulp house of a representative paper mill. This installation also includes a Morris Centrifugal Fire Pump.

N. E. TAPPI Discusses Air Conditioning

The New England Section of the Technical Association of the Pulp and Paper Industry met at the Hotel Raymond, Fitchburg, Mass., Friday evening, April 27th at 6:30 P. M. Frederic C. Clark, Chairman, presided. This was the first meeting of the Section in Fitchburg and was the largest meeting to date of the Section; more than 125 being present.

Following a musical program by Ned Cleveland, formerly of Lew Dockstader's minstrels, Mr. George Wallace, president of the Fitchburg Paper Company, extended welcome to the people present.

C. C. Heritage Discusses TAPPI

C. C. Heritage, president of TAPPI, was the first speaker. The plans for the fall meeting at Portland, Ore., were outlined and it was pointed out that at no time can anyone expect to make the trip in a more economical and interesting way.

In discussing the association, Mr. Heritage indicated that TAPPI is a service organization of 1,200 members working together for the common good. Of these, more than 200 are executives and managers, more than 100 superintendents. The rest are engineers and chemists.

The Divisional organization was described. These divisions are made up of more than 30 committees interested in the development of recommended practices, specifications and testing methods. These divisions include management, engineering, testing, raw materials, operating, converting and consuming, and research and development.

A new division to deal with paper grading was described. Under the NRA it is necessary to establish grades to conform to the price structure. The economic aspects of grading were stressed. The TAPPI grading division is to be set up to advise the grading committee of the various trade association divisions to see that this work is kept clear and fundamental.

The distribution of costs of the association was indicated. Among the intangibles include employment service, the opportunity to become better known and increasing personal friends, information from inquiries.

Humidity Control

Robert H. Brown, research engineer, Parks-Cramer Company, Fitchburg, Mass., spoke on the subject of "Humidity, Its Control and Application to Paper." Absolute humidity is the number of grains of moisture in a cubic foot of air. Relative humidity is the proportion of moisture which the air can hold at a given temperature.

Increase the dry bulb temperature 20 degrees and the relative humidity will be decreased 50 per cent.

"Air Conditioning in Printing and Lithographic Plants," a book issued by Parks-Cramer Company, was described.

Steam is objectional as a relative humidity producing agent. If temperature is raised during dehumidification the humidity is lowered.

A number of hygrometers were shown and described. An absorption type hygrometer must be constantly calibrated. Temperature has a considerable effect on readings of hair hygrometers. While temperature is changing, the reading may be inaccurate since there is a time factor involved. Care should be taken to see that the wick on the thermometer is not touched by the hand since such handling will detrimentally affect the thermometer readings.

The speaker criticized the paper published in the PAPER TRADE JOURNAL by R. H. McKee and J. S. Shotwell, June 2, 1932. In this paper it is claimed that paper has the same regain at 90 degrees as at 70 degrees. This is contrary to the experience of the speaker. Tests made by him were contradictory to results reported by McKee and Shotwell.

Weber and Snyder of the Bureau of Standards reported that with relative humidity held constant the higher the temperature the less the regain in lithographing papers between 65 and 110 deg. F. It was recommended that relative humidity should be controlled within 2 degrees and the temperature within 5 degrees plus or minus.

Paper properties such as folding endurance, tearing strength, etc., are greatly affected by humidity conditions.

The importance of cooperation between the printer, the wholesaler and the paper manufacturer was stressed. Unless the printer has control over the humidity in his plant he is sure to have trouble with the paper he uses.

In the discussion the question as to whether it is desirable to overdry paper and to bring the moisture content back by conditioning was brought up.

F. C. Clark believed that it is disadvantageous to overdry the sheet.

C. C. Heritage felt that more uniform moisture content can be obtained by overdrying and bringing the moisture control back by means of sweat rolls.

L. M. Yoerg said that if an antique finish is desired you should overdry first.

Mr. Heritage asked the speaker what device is on the market for indicating and controlling moisture in the sheet.

The speaker referred to the article in the PAPER TRADE JOURNAL of May 25, 1933, by Heppenstall who favors electrical conductance method. This is not applicable to measuring the moisture content as the sheet is being made. There is no device for accomplishing this at the present time.

H. W. Richter recommended the Tagliabue-Heppenstall meter to measure the moisture in board. The results are essentially qualitative.

R. M. Cobb reported the results of an investigation made in the lithographic plant that there are 18 factors affecting register in a well controlled plant.

The next meeting will be held at Holyoke on May 18 and at Dalton on June 15.

Among Those Present

Among those members present were the following:

Rex J. Adams, Old Colony Envelope Company, Westfield, Mass.; Angelo M. Altiere, Fitchburg Paper Company, Fitchburg, Mass.; John F. Acer, Acer, McLernon & Co., Ltd., Montreal, Canada; John Bellows, Monadnock Paper Mills, Bennington, N. H.; Arthur M. Brooks, Raffold Process Corporation, Andover, Mass.; Maurice E. Blew, Strathmore Paper Company, West Springfield, Mass.; H. A. Bolles, Strathmore Paper Company, Woronoco, Mass.; Philip S. Bolton, Clinton Sales Corporation, Boston, Mass.; A. F. Brunell, Papermakers Chemical Company, Willimansett, Mass.; Robert H. Brown, Parks-Cramer Company, Fitchburg, Mass.; Paul Bathelt, Holyoke, Mass.; Arthur L. Bull, Fitchburg Paper Company, Fitchburg, Mass.; R. C. Bradbury, Fitchburg, Mass.; Arthur Cardinal, Falulah Paper Company, Fitchburg, Mass.; F. C. Clark, Skinner, Sherman, Inc., Boston, Mass.; George Carroll, American Writing Paper Company, Holyoke, Mass.; Lester Crouse, Staley Company, Springfield, Mass.; Norman Clark, New York City; L. M. Booth,

Booth Chemical Company, Elizabeth, N. J.; C. W. Damon, Fitchburg Paper Company, Fitchburg, Mass.; F. L. Darrell, International Paper Company, Turners Falls, Mass.; Frank R. Filz, Geo. W. Wheelwright Paper Company, Leominster, Mass.; Matthew V. Hogan, American Writing Paper Co., Holyoke, Mass.; Harold Holden, Papermakers Chemical Company, Stoneham, Mass.; P. B. Holden, Rising Paper Company, Housatonic, Mass.; Clark Heritage, Oxford Paper Company, Rumford, Maine; Wilder A. Chapman, Skinner & Sherman, Inc., Boston, Mass.; John F. Inderdohnen, Bristol Company, Springfield, Mass.; Chester Irving, Fitchburg Paper Company, Fitchburg, Mass.; W. O. Johnson, Strathmore Paper Company, Woronoco, Mass.; Lena E. Kelley, American Writing Paper Company, Holyoke, Mass.; Helen U. Kiely, American Writing Paper Company, Holyoke, Mass.; Ralph W. Kumler, Bennett, Inc., Wilmington, Dela.; John P. Kennedy, American Writing Paper Company, Holyoke, Mass.; Maurice N. Labelle, Tileston, Hollingsworth Company, Mattapan, Mass.; William Lamory, American Writing Paper Company, Holyoke, Mass.; Frank H. Leonard, Marble-Nye Company, Providence, R. I.; F. C. Ladd, Keith Paper Company, Turners Falls, Mass.; Harold W. Lavallee, Clinton Sales Corporation, Holyoke, Mass.; H. L. Mellen, Deerfield Glassine Company, Monroe Bridge, Mass.; J. L. Merrill, Valley Paper Company, Holyoke, Mass.; Charles A. Minor, Collins Mfg. Company, North Wilbraham, Mass.; Frank McDonnell, Tileston, Hollingsworth Company, Mattapan, Mass.; R. G. MacDonald, Secretary Technical Association Pulp and Paper Industry, New York City; Herbert L. O'Neil, Falulah Paper Company, Fitchburg, Mass.; Charles O'Neil, Castle & Overton Company, Holyoke, Mass.; Robert Pattison, American Writing Paper Company, Holyoke, Mass.; R. J. Proctor, Fitchburg Paper Company, Fitchburg, Mass.; Harold R. Rafton, Raffold Process Corporation, Andover, Mass.; Wilbur P. Richardson, Arthur D. Little, Inc., Cambridge, Mass.; H. W. Richter, Geo. O. Jenkins Company, Bridgewater, Mass.; K. A. Sheridan, Strathmore Paper Company, Woronoco, Mass.; O. R. Steffens, Penick & Ford Company, New York City; Claude Smith, American Writing Paper Company, Holyoke, Mass.; L. Stirling, Papermakers Chemical Company, Williamsett, Mass.; Peter Sinclair, Sinclair Company, Holyoke, Mass.; George Sinclair, Fitchburg, Mass.; W. D. Stroud, F. C. Huyck & Son, Albany, N. Y.; George D. Ormsbee, Toledo Scale Company, Springfield, Mass.; L. A. Thompson, Papermakers Chemical Company, Willimansett, Mass.; Leonard Taylor, American Writing Paper Company, Holyoke, Mass.; Dr. K. A. Taylor, Oxford Paper Company, Rumford, Maine; H. L. Thompson, Nashua River Paper Company, East Pepperell, Mass.; D. D. Uong, Fitchburg Paper Company, Fitchburg, Mass.; William Whiting, Jr., Whiting Paper Company, Holyoke, Mass.; Frank S. Willey, Collins Manufacturing Company, North Wilbraham, Mass.; I. V. Wilson, Merrimac Chemical Company, Everett, Mass.; J. F. Wright, National Aniline Company, Boston, Mass.; Jess Wright, A. M. Meincke & Son, Chicago, Ill.; L. M. Yoerg, American Writing Paper Company, Holyoke, Mass.; George Wallace, Fitchburg Paper Company, Fitchburg, Mass.; Leon H. Larson, R. T. Vanderbilt Company, New York City.

Delaware TAPPI Discusses Power Plant and General Maintenance

The 21st regular meeting of the Delaware Valley Section of TAPPI was held Friday evening, April 27, 1934, at the Engineers Club in Philadelphia, Pennsylvania, Dr. G. E. Landt presiding.

Nominating Committee Reports

The nominating committee, D. Manson Sutherland, chairman, announced the selections of the following names for election at the May meeting: Chairman, H. P. Cannon, Container Corporation of America; Vice Chairman, H. C. Schwalbe, Dill & Collins, Inc.; Secretary-Treasurer, J. C. Harper, Jr., West Jersey Paper Corporation; Executive Committee: W. R. Maull, Dill & Collins, Inc.; and G. E. Landt, Continental Diamond Fibre Company.

The committee's recommendations were unanimously accepted.

Mr. Cannon made a report from the committee on the June social meeting. A majority of the members present favored an excursion to a country club for outdoor sports and dinner. The final plans will be reported at the May meeting.

The first paper presented on the subject of power plant and general maintenance problems was a very interesting resume of conditions at the Philadelphia plant of the Container Corporation of America, by S. D. Reynolds, power plant superintendent. It was pointed out that public utilities can not compete economically with an industrial plant which is able to produce power as a byproduct of the process steam generated. This is particularly true of a paper mill, where the demands for power and process steam are very nearly parallel to each other. Even though public utilities, by use of highly efficient, modern equipment, have decreased the fuel consumption by 50 per cent in the past few years, other expenses cut the saving to only 15 per cent. The use of modern equipment in the industrial plant transfers this fuel saving directly without the other losses.

Mr. Reynolds then proceeded to outline the alterations now in progress at his plant. The increase in liner board tonnage first made a tie-in with purchased power necessary. Later it was found that the continued increase in power and steam demands would require an addition to the power plant. In order to adequately compensate for load savings and varying steam demands, a double extraction condensing turbine generator unit with a high-pressure boiler, is being installed, and the existing boiler plant is being modernized. Only a small amount of purchased power will be retained as a relay in case of generator outage and for non-operating periods.

At the close of this paper, Mr. Reynolds answered a number of questions covering specific features of the new plant such as operating conditions, technical control and combustion problems.

Maintenance Problems in the Paper Mill

H. E. Hosner, plant engineer of the Scott Paper Company, Chester, Pennsylvania, presented a paper on "Maintenance Problems in the Paper Mill." The development of maintenance from the old time one-man system to its present well-organized system, is due to the evolutions of machinery and mechanics demanded by the speed of production and accuracy of workmanship today. A paper mill,

being in reality one continuous machine cooperation between maintenance and production forces, is essential. The most outstanding reasons for mechanical failures are faulty design, improper operations, lack of inspection and incorrect lubrication. The writer gave numerous specific examples of failure of machinery resulting from neglect of one of these points, stressing especially the need for a carefully planned system of lubrication and inspection by a man particularly trained for that work. The subject of plant safety was mentioned briefly.

An interesting discussion followed, which indicated that practically everyone has a vital interest in plant maintenance, even though not directly concerned. Considerable discussion brought out a variety of opinions in regard to the amount of maintenance required and the consensus was that the present tendency toward reductions in maintenance forces is in the wrong direction.

Those Who Attended

Those present included the following: E. N. Glauner, Downingtown Manufacturing Company, Downingtown, Pa.; E. Keys Haas, Elk Paper Manufacturing Company, Childs, Md.; H. E. Hosner, Scott Paper Company, Chester, Pa.; J. C. Harper, Jr., West Jersey Paper Manufacturing Company, Camden, N. J.; C. J. Kern, Moore & White Company, Philadelphia, Pa.; H. T. Lundquist, National Vulcanized Fibre Company, Wilmington, Del.; S. H. Mikell, P. H. Glatfelter Company, Spring Grove, Pa.; M. Craig Maxwell, McDowell Paper Mills, Manayunk; F. J. Andrews, same company; Joseph Pekora, Dill & Collins, Inc., Philadelphia; John Roslund, Moore & White Company, Philadelphia; C. W. Rivise, Caesar & Rivise, Philadelphia; Robert A. Reddie, Scott Paper Company, Chester; W. C. Robinson, Dill & Collins, Inc., Philadelphia; W. Page Selby, Elk Paper Manufacturing Company, Childs, Md.; H. H. Street, National Vulcanized Fibre Company, Wilmington; D. Manson Sutherland, Jr., Trenton, N. J.; Fred Streicher, Dill & Collins, Inc., Philadelphia; C. A. Shubert, Dill & Collins, Inc.; J. Scheffer, McDowell Paper Mills, Manayunk; W. M. Shoemaker, National Vulcanized Fibre Company, Yorklyn, Del.; H. C. Schwalbe, Dill & Collins, Inc.; F. W. Vardan, Barber Asphalt Company, Philadelphia; J. W. Voller, Dill & Collins, Inc., Philadelphia; A. W. Wickham, MacAndrews & Forbes Company, Camden, N. J.; A. E. Waugh, United States Rubber Company, Philadelphia; F. E. Winslow, General Electric Company, Philadelphia; E. F. Troop, P. H. Glatfelter Company, Spring Grove, Pa.; E. J. Albert, Thwing Instrument Company, Philadelphia; A. E. Elwine, P. H. Glatfelter Company, Spring Grove; R. E. Aiman, Paterson Parchment Paper Company, Modena, Pa.; Leroy Benge, Marshall Bros., Inc., Yorklyn, Del.; J. H. Brougham, Penn Fibreboard Company, York, Pa.; Samuel Blum, H. M. Wilson Company, Philadelphia; A. J. Barea, Paterson Parchment Paper Company; R. Borie, A. M. Collins Manufacturing Company, Philadelphia; R. E. Bare, Elk Paper Manufacturing Company; F. W. Brainerd, Scott Paper Company; C. M. Connor, Valley Forge Laboratories, Conshohocken, Pa.; F. H. Cronin, National Vulcanized Fibre Company, Wilmington; A. M. Cooper, Westinghouse Electric and Manufacturing Company, Philadelphia; O. C. Cordes, same company; H. P. Cannon, Container Corporation of America, Manayunk; J. C. Dieffenderfer, Paper Makers Chemical Corporation, Easton, Pa.; C. R. Engel, Robert Gair Company, New York; William Evans, Dill & Collins, Inc., Philadelphia; C. L. Ellis, Downingtown Manufacturing Company, Downingtown, Pa.; W. L. Fitzgerald, Thwing Instrument Company, Philadelphia.

Glidden Joins TAPPI

The Glidden Company with headquarters at Cleveland, Ohio, has recently become a company member of the Technical Association of the Pulp and Paper Industry. Since this progressive organization at present may not be so well known in some quarters of the pulp and paper industry, it might be of interest to outline something of its history. It is significant of the growing importance of the paper industry that such outstanding representatives of related fields as The Glidden Company are planning to enter our industry.

The Glidden Paint & Varnish Company was founded in Cleveland in 1870. In 1917 it became incorporated under the laws of the State of Ohio and was renamed "The Glidden Company." Under the guiding spirit of Mr. Adrian D. Joyce, its present president, the company was reorganized as a consolidation with eleven other manufacturers. It has since that gone through an admirable development and now has its numerous subsidiaries spread all over the United States and Canada.

It operates in addition to a general paint and varnish business, The Chemical & Pigment Company (plants in Baltimore, St. Louis, San Francisco), The American Zirconium Corporation, the Euston Lead Company, Wood Chemical Products Company, Nelio-Resin Corporation and various other industrial enterprises.

Because of this diversified activity, it functions in divisions of which the Paint and Varnish Division and the Chemical and Pigment Division are of special interest to the paper industry.

Under the Chemical and Pigment Division it is one of the largest manufacturers of pigments and dry colors producing practically a complete line of pigments for the paint industry. The use of these pigments as fillers in the paper industry will no doubt increase as some of them are already being used successfully in this industry.

Mr. W. J. O'Brien, one of the executive vice-presidents, is in charge of the manufacturing. Under him such well known products as Sunolith, Lithopone (zinc sulphide pigments), Titanated Lithopone (titanium zinc sulphide pigment), Cadmium Reds and Cadmium Yellows were developed.

The Glidden Company will be represented in the Technical Association by Dr. Eric Wahlforss who is working directly under Mr. O'Brien in the development of products of interest to the paper industry.

Dayton Waste Dealers Organize

DAYTON, Ohio, April 30, 1934.—The Waste Material Dealers Association was formed at a meeting held at the Miami Hotel the past week, to act as a governing authority for the enforcement of the NRA codes relating to the industry, and to help trade in the classification costs and other business matters.

The officers elected were Tony B. Patterson, president; Maurice Sajovitz, vice-president; and Henry D. Israel, secretary and treasurer.

The following companies are members of the Association: American Waste Material Company, Big Four Coal and Iron Company, Buckeye Iron and Metal Company, Dayton Iron and Metal Company, Duberstein Iron and Metal Company, Dayton Waste Material Company, Hydraulic Rag and Paper Company, the Israel Brothers Company, Letellier Phillips Paper Company, Longworth Iron and Fuel Company, Pennsylvania Iron and Coal Company, I. Sajovitz Sons Company, State Iron and Metal Company Some of the above metal concerns deal in waste paper and kindred products.

PAPER INDUSTRY OPPOSES RECIPROCAL TARIFF BILL

(Continued from page 17)

Coupled with its wish for so much and no greater protection than is needed to equalize production costs here and abroad, the paper industry has been a steadfast believer in the principle of a flexible tariff, through which changes can be made in rates as economic conditions require. That the operation of the flexible tariff provision as it now exists is effective is shown by the fact that, excluding those items in the pulp and paper industry which are on the free list, our exports almost exactly balance the imports in both dollar value and tonnage.

As part of its tariff program, the paper industry has for the past ten years maintained a specialist organization, the Import Committee of the American Paper Industry, a fact finding organization whose duty has been systematically to study all questions of foreign competition. The paper industry, therefore, is in an unusual position in American industry, in that it has taken the leadership in its advocacy of scientific tariff making, and in that it has a most complete knowledge of foreign competition and trade conditions.

Can Speak Authoritatively

The paper industry, by reason of the existing conditions as to international trade, and its unequaled knowledge of the details of such trade, is in a position where it can speak authoritatively on the pending tariff bill. It has placed itself on the border line at which a slight change in foreign or economic conditions is reflected instantly in increasing imports. This statement applies to nearly every grade of paper. Import records of paper of all kinds, show that foreign producers are quick to take advantage of the slightest change in domestic conditions. Inasmuch as the paper schedule in the Tariff Act is based on a bare equalization of production costs here and abroad, removal of any existing import restrictions would sway the delicate balance in favor of the foreign producer.

Imports of paper, pulp, pulpwood, and other paper making raw materials combined, amount to a total gross value *higher than that of any other imported commodity*. The great bulk of these imports are duty free and too much of the industry is already suffering from foreign competition of free goods, particularly newsprint, to be able to survive any step to extend the opportunities of foreign competition.

Existing Duty on Paper Not Excessive

Existing duty rates on paper are not excessive. In the case of book paper, for instance, the rate is ¼ cent per pound and 10 per cent, a rate of about 20 per cent on the cheaper grades of book paper, and even less on the higher grades. America's requirements for cigarette paper are almost completely filled by France, even though the rate of duty on this paper is 60 per cent. Imports of cigarette paper last year were valued at $3,400,000, and in 1931 at over $5,000,000.

We have in our industry an outstanding example of the results of reciprocity negotiations. In 1911 a reciprocity treaty was drawn with Canada, by which Canadian newsprint would have been given special consideration. Canada did not accept the treaty, but newsprint was placed on the free list in 1913 as a result of the reciprocity discussions. The outcome was that our newsprint market was presented to Canada, and the United States was given nothing in return.

With this example of so-called reciprocity before us, we naturally look with apprehension on reciprocity agreements, and particularly the giving to any person or department the power to make such agreements without domestic producers having any knowledge of what is contemplated, or a full factual hearing before an agreement is concluded.

The paralysis of the domestic newsprint industry by these events in past history point to the danger hidden in the proposed tariff bill. The report by the United States Tariff Commission during the pendency of the Tariff Act of 1922 showed that in 1914 domestic production of newsprint was 1,313,284 short tons. In 1914, imports amounted to only 11 per cent of the domestic consumption, and by 1920 the Tariff Commission report shows that imports had risen to 48 per cent of the United States consumption. Today those imports constitute two-thirds of the domestic requirements.

Importance of Newsprint Situation

That the paper industry regards this situation as important to the entire industry is better shown by the resolution adopted by the Paper Industry Authority at its meeting February 7, 1934. The Paper Industry Authority does not include the domestic newsprint industry, so the resolution which follows shows the importance with which the industry as a whole regards the newsprint situation.

VOTED: That the following resolution be presented to the Newsprint Code Authority, setting forth the attitude of the Paper Industry Authority:

WHEREAS the Paper Industry Authority is charged with a great responsibility in representing the paper industry (other than newsprint paper)—the tenth largest industry in the United States and with an investment of over $1,500,000,000 in plants, exclusive of water powers and timberlands; and

WHEREAS the newsprint industry in the United States is efficiently and economically operated and producing a product of prime national importance and yet by reason of destructive price-cutting and sales far below cost, is on the verge of a collapse which would destroy it; and

WHEREAS the price of newsprint is the foundation on which rests a large part of the price structure of the entire paper industry, and its collapse would necessarily involve great demoralization of the whole paper industry and would imperil the ability of the industry as a whole to continue to pay the increased wage scale and maintain the shorter working hours adopted by the industry under its Code; and

WHEREAS this would affect not merely the workers directly or indirectly supported by the newsprint industry but also 125,000 wage earners directly employed in the United States pulp and paper mills and a number probably exceeding 300,000 indirectly employed in that industry;

RESOLVED, that the Paper Industry Authority regards the condition of the newsprint industry with the gravest apprehension, and recommends to the National Recovery Administration that every effort be made to work out a plant which will accomplish the stabilization of the newsprint industry.

Newsprint is already on the free list, the developments in 1911 to 1913 having permitted not only Canadian, but European and Japanese newsprint to come into this country duty free to such an extent that the United States mills, instead of having 89 per cent, as in 1914, now have less than one-third of the American market.

Our fear of the pending legislation is that the same

course which has proved so disastrous in the newsprint field may be taken with regard to other papers. Not only was the newsprint market given to Canada but the United States newsprint machine capacity has been thrown in part into other fields, tending to disrupt the entire structure of the domestic industry.

Wood Pulp Another Example

The import records for wood pulp are another example of what has happened to the American Paper Industry through a change of tariffs. Up to 1913, wood pulp was on the dutiable list, and the average value of imports for the four years from 1910 to 1914 was $14,600,000. The average for the period from 1922 to 1926 was over $77,000,000, and even in 1933, when prices had dropped sharply due to the depression, and when paper production was far below normal, the imports were valued at over $57,000,000. Today some mills with pulp equipment find that they can import pulp cheaper than they can produce it in their own plants.

Not only does the pending bill affect the paper industry directly, but it contains possibilities of even more serious effects indirectly. A concrete example, of a type which permeates the entire industry, is the case of paper book matches with which everyone is familiar. This may seem like a small item, yet the paper board for these books is made in this country to an average of about 800 tons per month, and is an item of importance to at least eight American mills. It is said that a proposed agreement with Sweden will facilitate the importation of these matches, already an important item of foreign trade. The same rate of duty must apply to Japan, which is entering the field in no small way. This means a loss of market for the American manufacturers of match board. Similar examples could be mentioned almost without number.

The grant of authority to the Executive to modify rates is one which we feel to be too dangerous to be permitted. With the present provision, the Executive can reduce duties without a hearing. We as an industry are strong believers in a flexible tariff. We are not believers in a tariff modified by "logrolling" in Congress or by arbitrary action of any administrative person or bureau. It is conceivable that such power would not be used improperly—but no such power should be given to any one person. Human frailty is still with us.

We do not object to tariff changes when justified by facts, and with an opportunity for American industry to be heard on its own behalf.

It has been said that the plan of some of the administration leaders is to determine what industries are not necessary in the American economic scheme, and to arbitrarily sacrifice those industries to the advantage of export trade for other American made commodities. This report may not be true. However, it is true that the pending bill does not provide for hearings for American industries which may be sacrificed by reciprocal trade agreements, if the reported program is correct.

Concerned About Paragraph 1402

As to the repeal of the countervailing provisions of the present Tariff Act. We are concerned with the clause in Paragraph 1402, which is as follows:

"If any country, dependency, province, or other subdivision of government imposes a duty on any article specified in this paragraph, when imported from the United States, in excess of the duty herein provided, there shall be imposed upon such article, when imported either directly or indirectly from such country, dependency, province, or other subdivision of government, a duty equal to that imposed by such country, dependency, province, or other subdivision of government on such article imported from the United States."

The purpose of this provision is to make available a procedure by which any adverse tariff action by foreign countries can be met by the imposition of a duty on goods from any such country equal to that imposed on our goods going to such a country. To be specific: The duty on paper board coming into this country is 10 per cent, limited by the clause in Paragraph 1402. The duty on paper board going from the United States to Canada is 35 per cent, plus the other taxes collected by Canada which come within the countervailing duty provision. In the face of this rate of duty, imports from Canada are rapidly increasing, as to certain types of paper board.

This provision, applying chiefly to the paper board industry not included in the American Paper and Pulp Association, affects certain types of board such as shoe counter board coming from Europe for the New England shoe industry. Many paper mills in that region, which are members of this Association, are dependent solely on this outlet for their product. The countervailing duty provision has not been sufficient to prevent sales from abroad at less than the cost of the American product.

The pending bill proposes to wipe out this provision and throw the gates open to wider competition than now exists, and to price quotations under which the American industry can not compete if it is to continue operating under the wage and labor provisions of the Recovery Act.

Instead of wiping out the existing countervailing provision, the Paper Industry believes that the countervailing clauses now present in the Tariff Act as to specific commodities should not only remain in the Act, but should be taken out of the specific paragraphs where they now appear and made to apply to all schedules, and to all paragraphs in such schedules.

The Forestry Problem

The present administration has shown great interest in the forestry problem. It is worthy of note that the American Paper and Pulp Association was foremost in American industry in its efforts during the past fifteen years to secure legislation which would preserve the forests, and to make them not only self-sustaining, but utilize the nation's forest resources for industrial purposes under conditions which would result in reforestation of land best fitted for forest growth, and a proper conservation of the present forests. Individual paper companies have from their own resources led all American industry in the practice of private forestry.

The great lumber industry has now in its operations under the Recovery Act provided for taking the steps which we have advocated in broad terms for the Paper Industry. With the tariff situation as it now exists, the Paper Industry can not carry out an adequate forestry program to the extent the industry desires. With adequate protection against foreign competition the Paper Industry can progress along these most desirable lines.

A Specific Example in the South

A specific example is seen in the recent developments in the South, where newsprint has been made from southern pine. It has been asserted that the domestic newsprint industry can be reestablished by the use of this raw material, given the proper incentive. With Canadian and domestic newsprint mills today selling paper at far less than the cost of production; with European newsprint paper being sold in our markets at $7 per ton less than the North American product, no one with financial foresight can invest his funds in experimentation or development of an industry even with a potential market of far over one hundred millions of dollars a year, when he knows that existing mills are operating at a loss.

The paper industry believes that the provisions for the changes of duty under the so-called flexible tariff provisions of the existing Act give the needed assurance to domestic industry that it will be given its opportunity to prove that reductions are not justified, and there is no reason we can see why these provisions should be nullified. It would seem that a due process of investigation as provided by the existing Act should be available to domestic industry before any reciprocal trade agreement with a foreign nation is concluded, and that such opportunity for hearing should not so delay action on any proposed agreement as to unduly delay the entering into an agreement which may be for the benefit of our international trade.

Statement by National Paperboard Association

The American paperboard industry is deeply concerned at both the general and special provisions of the proposed bill to give the Executive power to negotiate reciprocal tariff treaties.

In general terms, it is opposed to any proposal to grant any person or group the power to determine the future of any American industry without such industry being given opportunity to be heard in its own defense.

In special terms it is opposed to the proposed repeal of the countervailing provision in Paragraph 1402 of the Tariff Act of 1930, for this provision applies to imports from various countries, of various types of board, and even this provision has not been sufficient to prevent an increase in imports from countries which are more rigid in their treatment of paperboard than we are of such products from those countries.

Capital Investment of $200,000,000

The Paperboard Industry as represented in the National Paperboard Association, includes 200 mills, with a capital investment of $200,000,000 and an average normal output of 4,000,000 tons, valued at $180,000,000. It has wide distribution. Its employes number 25,000 and in addition there are other workers employed in converting industries to a total of 200,000. The Association's members are operating mills in New England, Southern, Middle Western, Rocky Mountain and Pacific Coast States.

This indicates the importance of the industry which is making this presentation on the pending measure.

The paperboard industry will not discuss in detail its opposition to the proposal to give the Executive such sweeping power over industry as would be granted if the pending measure becomes law. The Industry is strongly opposed to any such grant of authority, because it feels that any branch of industry which is threatened with increased competition has a right to present facts and be heard before any decision is made which may reduce its industrial opportunities. We insist that the right to be heard be included in any measure which may be enacted.

The special situation of the Paperboard Industry is that on which we have asked to be heard.

Paragraph 1402 of the Tariff Act of 1930 includes these words, known as a countervailing clause:—"If any country, dependency, province, or other subdivision of government imposes a duty on any article specified in this paragraph, when imported from the United States, in excess of the duty herein provided, there shall be imposed upon such article, when imported either directly or indirectly from such country, dependency, province or other subdivision of government, a duty equal to that imposed by such country, dependency, province, or other subdivision of government on such article imported from the United States." Similar provisions appear in paragraphs relating to other specific commodities. The pending bill would repeal all these provisions, which are intended to serve for defense against tariff action by other countries which would impose higher duties on our commodities than we levy on those commodities imported from such countries.

Paperboard from Canada

Paperboard from Canada is a specific instance. Paragraph 1402 of the Act of 1930 provides a duty of 10 per cent on unprocessed paper boards, but includes this countervailing clause. American paperboard going into Canada is subject to a duty of 35 per cent, plus an excise tax of 3 per cent on the duty paid value. Under the countervailing clause, Canadian paperboard coming to the United States is subject to 39 per cent duty, instead of 10 per cent. Even with this rate of duty, Canadian exports to this country have been growing rapidly in the last few months. To repeal the countervailing clause will instantly open our markets more widely to competing paperboard from Canada, for even with the existing duty we can not meet the Canadian prices.

This is an outstanding example of a condition which exists in other branches of the paperboard industry, and as to other types of boards from other countries. Our mills at present have difficulty in adhering to the schedule of wages and hours of labor accepted under the Industrial Recovery Act, and at the same time meet the competition from other countries not paying the wages earned in this country. With the present rates lowered there is grave danger that we can not continue to operate under the conditions of the Recovery Act which our entire industry is now accepting.

In a study of the operation of the countervailing clause of Paragraph 1402 which it is proposed to repeal, we find a large number of types of boards which will be subject to a lower duty than is now levied the moment this bill is effective. Some of these boards are under the code of the Paper Industry Authority and some under the code of the Paperboard Authority, but all are dutiable under Paragraph 1402. There is material foreign competition on all the following boards even now, when the countervailing rate is higher than 10 per cent:—

Canada—Pulp board and screening board; mill wrappers.

Germany—Trunk board; counterboard and leatherboard.

Sweden—Insulation board; trunk and fibre counter board.

Norway—Fibre board.

While there is competition in various boards other than the above these are the grades in which the repeal of the countervailing clause in Paragraph 1402 would increase the opportunities of foreign countries to sell in our market where even the present rate is to their advantage.

Countries Which Might Ship to U. S.

Countries not now shipping to the United States which might do so were the countervailing duty eliminated are:

Belgium—Sulphite board; wood pulp board; straw board.

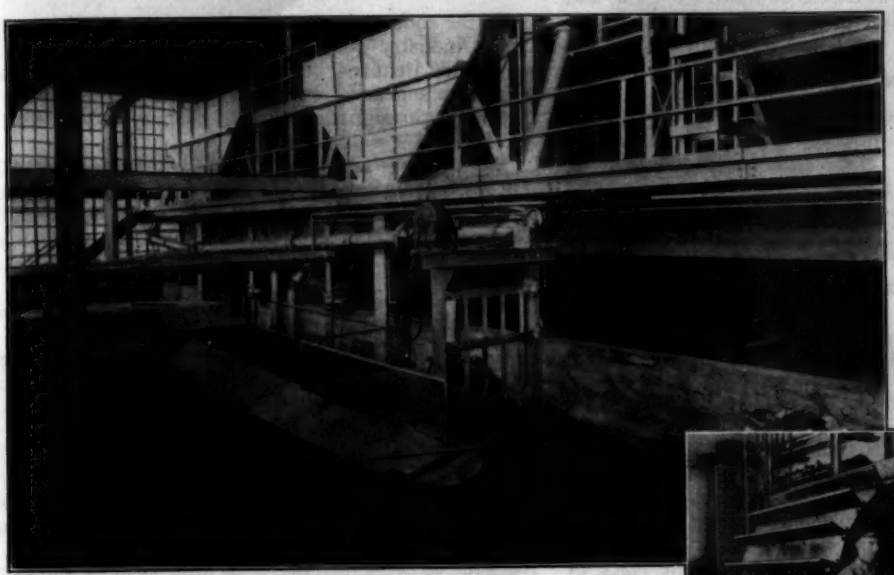
Italy—Miscellaneous special boards.

Japan—Wall board; cardboard and leather board.

Spain—Cardboard.

The situation as to Canada is graphically shown by statistics of imports of boards subject to the countervailing duty, follows:—

	Pounds	Value
1931	3,644,563	$67,260
1932	1,353,175	24,498
1933	1,768,079	28,201
1934 (3 months)	1,645,007	25,544
January	741,553	11,281
February	563,995	8,771
March	339,459	5,492



This Company operates three Dilts 150 Ton Continuous Beaters and Dilts cleaning and thickening systems.

STOCK PREPARATION

Stock preparation is more important today than ever before.

Dilts continuous beaters; Dilts New Type batch beaters; Dilts New Type refiners and hydrafiners; Dilts keyed type bandless beater rolls; Dilts newest breaker beater roll with (new patent) braced bars; Dilts special alloy heat treated fly bars; Dilts engineers to plan your mill improvements and advise with you throughout; Dilts, in fact, to furnish your entire stock preparation equipment.

Sixty-five years of experience building Dilts beaters for paper mills in five continents.

—Dilts—

MACHINE WORKS Inc. FULTON, N.Y.

"Your Paper Is Made In Your Beaters"

In other words, the imports from Canada for the first quarter of this year were nearly equal to the total imports from that country in 1933, in excess of those for 1932, and about half those for the high year of 1931. The countervailing rate of 35 per cent went into effect in 1931.

The Situation in Straw Board

While we have presented our position on the specific danger of the repeal of the countervailing provision of the paperboard paragraph, there is a situation involving straw board which merits a few moments of discussion.

The American straw paper and straw board industry has had a long and interesting history. Most of us will recall the use of a coarse brown paper by butcher shops. With the development of other grades of paper, chiefly because of their grease resistance, the use of straw paper diminished as a wrapping paper, and the product was diverted to the manufacture of corrugated containers, and straw boards went into other uses.

This administration is known as a friend of the farmer. The farmers of the middle west have had a market of some 50,000 tons of straw annually. Today Dutch straw board is coming into this country at prices which the American mills can not meet, and historic old mills have discontinued operation. Not only is the straw board from the Netherlands displacing our domestic straw board because of its low prices, but it is even taking the place of the lower priced container boards made by American mills. The Dutch duty on straw board is only 5 per cent, so these shipments are not affected by the countervailing provision of the existing law. However, should this provision be removed, Belgium, which can make board as cheaply as Holland, if not at a lower price, will be able to enter this market, thus further disrupting the present condition. Incidentally, let me say that the board which Dutch straw board is replacing is not only made from straw from middle western farms, but also from waste paper, of which American mills purchase approximately 2,000,000 tons annually.

The paperboard industry believes that the countervailing provision of the Tariff Act should not only be continued in effect, but in principle we agree with the thought that such a provision should be extended to the entire tariff schedule, instead of being limited to specified commodities. We believe that the present flexible tariff provisions are sufficient to protect the American consumer against unduly high prices, while at the same time they give domestic industry protection against arbitrary sacrifice in the interest of export trade.

G. H. Mead on Emergency Council

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, April 30, 1934.—George H. Mead, president of the Mead Paper Corporation, has been appointed to be a member of the National Emergency Council to prepare plans for a national housing project. A number of prominent business men are cooperating with Secretary of Commerce Daniel C. Roper.

W. A. Julian, Cincinnati, who is widely-known in Miami Valley manufacturing circles, also is a member of the group named by the cabinet man. R. Douglas Stuart, of the Quaker Oats Company, Chicago, also is well-known here by reason of the large quantities of paper box board used by his concern.

The group is known as the Executive Committee of the Business Advisory and Planning Council.

In Dayton alone two sections of the city have been selected for the elimination of undesirable buildings and an expenditure of $4,000,000 is planned.

First Code Authority Budget Is Submitted For a Hearing

To the code authority for the set-up paper box manufacturing industry goes the distinction of being the first to submit an itemized budget of its estimated expenses for 1934, public hearing on which was announced by the NRA last week through the office of Deputy Administrator W. W. Pickard.

The hearing, which is scheduled to begin at 10:00 A. M. Tuesday, May 8, 1934, in the Sun Parlor of the Washington Hotel, Washington, D. C., also will cover additional amendments proposed by the code authority to the approved code for the industry, as follows:

(1) To require any firm or individual desiring to install additional equipment to obtain "a certificate of necessity and convenience" from the Administrator; and

(2) To empower the code authority to determine when an emergency exists as a result of destructive price-cutting, and to impose a lowest reasonable cost below which products of the industry then may not be sold.

The budget submitted by the code authority for approval calls for a total expenditure of $85,050 for the year, with major apportionments as follows: Executive expense, $8,000; Office Salaries, $6,200; Stationery and printing, $3,500; Office rent, $3,000; Cost supplies, $7,000; Staff traveling expense, $6,000; Executive salaries and retainers, $24,000; and Accountant, investigation statistical work expense, $20,000.

Cambridge Paper Co. Organized

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., May 1, 1934.—The Cambridge Paper Company, Inc., recently organized, opened at 62 Hampshire street, Cambridge, Mass., today, dealing in paper box board, box board specialties and waste paper. Lewis F. Baker, president, and Jacob A. Promboim, treasurer, are both experienced in the business. The company had been in temporary quarters at 131 Beverly street, Boston.

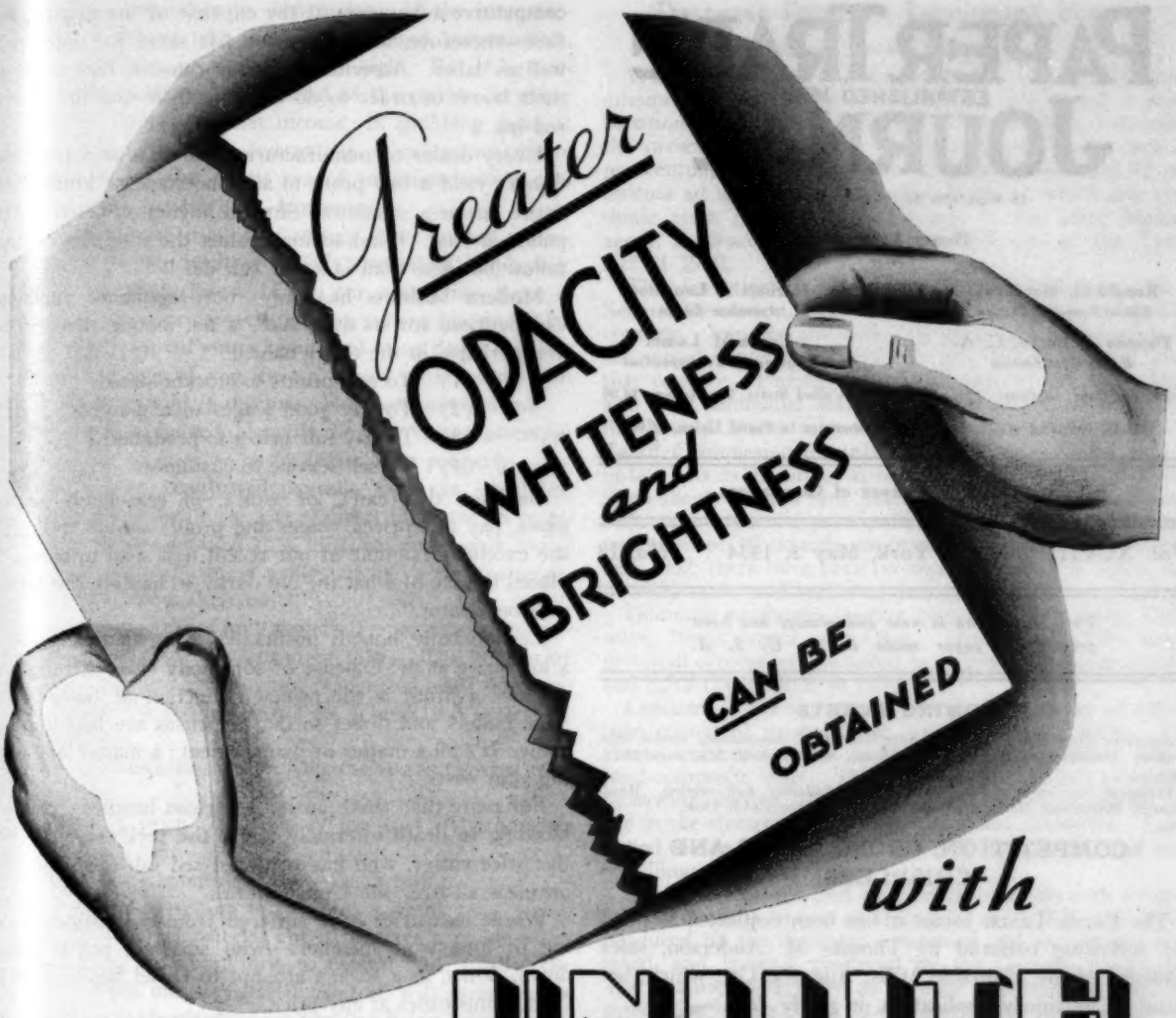
Mr. Baker was with the Boston Paper Board Company for a number of years until 1926. Since then he has been local representative for W. G. Shortess, of Bogota, N. J., occupying the office at 131 Beverly street for that concern. Mr. Promboim formerly operated with the proprietor of L. Promboim & Son, Inc., Cambridge. This firm discontinued business in 1926, on the death of Mr. Promboim, Sr. Miss Mary Gilfeather, formerly associated with the United Paper Board Company in Boston, is with the new firm as secretary.

Washington Submits New Paper Code

The Board of Governors of the American Paper and Pulp Association met at the Waldorf-Astoria Hotel, New York, last Thursday, for the purpose of considering the Proposed Revised Code of Fair Competition for the Paper and Pulp Industry, the full text of which was printed in the PAPER TRADE JOURNAL last week.

Shortly before the meeting a new Code was unexpectedly received from the Administration in Washington, D. C., and as a result it was decided to table the Proposed Revised Code. Copies of the new Code are to be released to all the paper and pulp manufacturers for their consideration.

The Board of Governors are to meet again on Thursday, May 10, to discuss and probably act on the New Code before returning it to the National Recovery Administration for approval. It is understood that there are no basic changes in the new Code from the previously Proposed Revised Code.



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COMING EVENTS

American Pulp and Paper Mill Superintendents' Association, annual convention. Headquarters Poland Spring House, South Poland, Me., June 20-22, 1934.

Technical Association of the Pulp and Paper Industry, Fall meeting. Headquarters Multnomah Hotel, Portland, Ore., September 10-13. 1934.

COMPETITION, CODES, COSTS AND CHISELERS

The PAPER TRADE JOURNAL has been requested to print the following editorial by Thomas M. Anderson, sales manager of the Riverside Mills, Augusta, Ga., which, because of its timely application, it gladly does:—

Nineteen hundred years ago the Master promulgated a Code which we call The Golden Rule. If we had followed it there would be little need now for supplemental Codes.

The NIRA Code should mesh gears with The Golden Rule!

Will the Blue Eagle label "exit" on the Chiseler?

All business is hopeful that the time has come when the NIRA will help cure sores that have existed for many years past.

Manufacturers can now once more center upon the improvement and perfection of his product instead of being forced to match pennies with his least responsible competitor.

American industry—manufacturers and dealers alike see the green light ahead and it is to be hoped the waving of the Red Lantern by the chiselers will be stopped so that path will be open to progress profitably. Codes entered into in good faith to shorten hours, increase wages, to grapple with unemployment—declaring an end to hostile destructive competition, indeed a code is a solemn compact not to engage in practices which are unjust to labor—not to sell goods below legitimate costs—not to derive unfair competitive advantages at the expense of the general welfare—therefore, the NIRA is a life saver for industry as well as labor. American industry can—in fact must put their house in order to do their part, to stop the flow of red ink.

Every dealer or manufacturer who sells at a price that doesn't yield a fair profit to all concerned is "knifing" the entire business structure. Shrewd buying on behalf of the public is vital. Blind selling against the interests of one's fellow business man is social suicide.

Modern business has only four legitimate functions. Competition, for its own sake, is not among them. They are, perhaps, in the order named:

(1) To pay profits to stockholders.
(2) To pay good wages to employees.
(3) To pay fair prices to producers.
(4) To sell service to customers.

Business that can't, or won't, in reasonably normal times, pay fair prices, wages and profits should, following the excellent example of our recent new deal in banks, be placed in care of what the old darky so happily mis-named a "Constipator."

Economically, nobody profits by buying an article sold at a low price at the expense of somebody else. After all, to produce a profit is the primary function of business—to plan, budget and direct so that expenses are less than income. It's all a matter of management; a matter of knowing your costs.

For more than three years, American business has been bleeding to death internally under the reckless thrusts of the price cutter, who has scattered red ink in all lines of business all over the United States.

Whole industries have suffered from the ruthless raiding of lone wolf members—who smashed prices down, down, down, in a savage attempt to chisel business away from competitors at any price.

The surest way to beat your competitor is to sell better goods for the money, use fairer business methods, be more courteous to customers, and render better service.

Clever purchases which go as presents, as special concessions to customers do not benefit anybody. The customer doesn't appreciate them only to the extent of knowing or feeling that he is buying as cheaply as his competitors.

Competitors can get along just as well when they are both selling an article for 22 cents per yard as they can when they are both selling it for 18 cents. It's only a question of having the same price and not having the price so high that it will materially affect consumption.

Merchants and manufacturers undoubtedly generally have over-estimated the interest of the consumers in price. Of course, consumers want low prices—that is, the lowest price they can get. If the merchant or manufacturer makes this price so low that it bears no profit, it's the merchant's or manufacturer's fault, not the consumers'.

It is up to the individual merchant to make his mind up on what he is going to do about conditions as they now exist. Business men have choice of two roads. One leads

to profit and the other to destruction. If the manufacturer and merchant take the road of sound, constructive, courageous selling, profits may be in sight. But if he persists in looking at the sale instead of the profit—in going after volume instead of net income; in grabbing sales at any price, the wholesale destruction of values which we have seen during the recent era of profitless selling will continue to its logical end—bankruptcy.

The trouble with this price cutting game is that a merchant can only win until everybody else starts to playing, and then everybody loses. If you cut your price, there is nothing to keep your competitor from cutting his, and if he cuts his, you must cut yours again, and so on down the line. In the end neither of you have sold any more goods than you would have sold if the price had been maintained.

The New Deal indeed demands the very closest attention to the subject of costs so as to define costs properly.

Shorter hours, readjusted payrolls, new tax schedules, advancing prices—all have a very direct influence on costs. Timely, accurate, detailed cost information is now indispensable to sound business management. Some manufacturers do not know their costs.

Some manufacturers and dealers do not take into consideration their entire overhead or taxes. The burden of taxes alone is quite a factor not recognized until the fiscal year ends and the red ink shows up. The NIRA is a blessing to business.

Too many business men fool themselves as to what constitutes costs!

The correct price of goods is the cost of producing them—plus a profit.

The cost of distributing them—plus a profit.

And the cost of selling them—plus a profit.

When the correct price is cut it involves a reckless destruction, first to labor, then to capital and, finally, the structure of the industry itself. And all will agree that, a price-cutting epidemic does nothing but bring harm for all those involved, as doing business at a loss means red ink and financial ruin.

The remedy for price cutting is simple; but it is not easy. It calls for a sense of responsibility on the part of executives, sales managers and salesmen—also. It calls for practical—sane—sensible brains on the part of sales executives throughout the United States.

Protection of legitimate business enterprises in the interest of buyers as well as wage earners from unfair competition through below cost price cutting and producers of misbranded or inferior goods for advertised products that have an established reputation, is an important service for all organizations to consider.

It Is Time to Stop the Flow of Red Ink!

Buys Colorado Paper Products Co.

The Central Fibre Products Company, with head offices in the Conway Building, 111 West Washington street, Chicago, has purchased the plant of the Colorado Paper Products Company at Denver, Colo., and took possession of the mill on April 9.

Decrease Duty on Laminated Sheets

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 2, 1934.—The Tariff Commission announces that the President has issued a proclamation which becomes effective May 23, 1934, decreasing the present rates of duty of 25 cents per pound and 30 per centum ad valorem to 15 cents per pound and 25 per centum ad valorem on laminated sheets of which any synthetic resin or resin-like substance is the chief binding agent, as described in paragraph 1539 (b) of the Tariff Act of 1930.

This investigation was instituted in compliance with a Senate Resolution. Germany is the principal competing country. Imports amounting to about 217,000 pounds in the period September 2, 1929, to June 17, 1930, came from that country. During the greater part of the years 1928 and 1929, laminated sheets were excluded from entry into the United States as a result of an investigation by the Tariff Commission of unfair methods of competition and unfair acts in the importation and sale of laminated sheets. Such sheets are not now excluded. Prior to the exclusion order imports came principally from Germany. With the exception of 10 pounds imported from Canada in December, 1932, there have been no imports under the Tariff Act of 1930 up to and including July, 1933.

Domestic producers operate plants in New York, Delaware, Pennsylvania, and Ohio. The output of the seven principal companies amounted to 11,964,000 pounds in 1929 and 6,707,000 pounds in 1930.

Laminated sheets generally consist of a paper or fabric base coated or impregnated with a synthetic resin. The sheets and resin under heat and pressure solidify into a hard composite sheet. They are as a rule further processed by sawing, cutting, and punching into shapes and forms for use in the electric, automobile, and radio industries. Laminated sheets are also used for table tops, trays, and wall panellings.

Costs were ascertained for laminated sheets with a paper base in qualities known to the trade, as X, XX, and XXX produced by the domestic companies and as normal, electrical, and tropical produced by the German companies. The qualities designated as X were important in domestic production, being about 50 per cent of the total production of paper base sheets of the 5 domestic companies; the normal quality was important in German production, being over 75 per cent of the total output of paper base sheets.

The commission found that the domestic X quality and the German normal quality were like or similar for purposes of Section 336 of the Tariff Act of 1930. The difference in costs of production of these qualities was found to be representative of the difference in costs of production of all grades of laminated sheets.

The average costs per pound delivered at New York, N. Y., for the domestic X quality was 52.5 cents and for the German normal quality 27.9 cents. The excess of the domestic costs over the German costs was 24.6 cents. The equivalent of the present duty (25 cents per pound and 30 per cent ad valorem) was 36.8 cents per pound, being 12.2 cents per pound in excess of the difference in costs.

Oji Paper Company Joins TAPPI

Reflecting improved business conditions in the "Land of the Rising Sun," the Oji Seishi Kabusiki Kaisha has again become a corporate member of the Technical Association of the Pulp and Paper Industry.

Oji, with its head office in Tokyo, is the largest paper company in the Orient and makes nearly every known grade of paper.

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For the manufacturer's convenience, The New Jersey Zinc Company produces a range of Zinc Sulphide Pigments, with Zinc Sulphide present in different amounts to provide different degrees of opacity.

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Section of the
Technical Association of the Pulp and Paper Industry
T.A.P.P.I.
Edited by Ronald G. Macdonald, Secretary

United States Patents On Papermaking

First Quarter, 1934

Compiled by Clarence J. West, Chairman, Committee on Abstracts and Bibliography, TAPPI

JANUARY 2, 1934

1,941,484. Apparatus for bending or creasing cardboards, fiber board or the like. John Irving Nasmith, assignor to Vickers-Armstrongs Limited, Westminster, England. Filed Oct. 3, 1932. 14 claims. (Cl. 93-58.)

1,941,491. Building product and method of making same. Thomas Robinson, assignor to Lancaster Asphalt, Inc., New York, N. Y. Filed July 10, 1928. 18 claims. (Cl. 154-2.)

1,941,536. Hard vegetable fiber product of high strength and process of making same. Robert M. Boehm, assignor to Masonite Corporation, Laurel, Miss. Filed May 18, 1932. 9 claims. (Cl. 154-2.)

1,941,769. Impregnated fibrous block. Gilbert J. Ward, assignor to Cheesman-Elliot Company, Inc., Brooklyn, N. Y. Filed Jan. 22, 1930. 3 claims. (Cl. 154-44.)

1,941,783. Indenting paper. Charles A. Bahr, assignor to William H. Ellis, Jr., Glendale, Ohio. Filed July 8, 1932. 12 claims. (Cl. 92-68.) Drying and indenting mechanism in combination.

1,941,793. Retting process of textile materials. Jules Alexis Marie Faut, assignor to "Les Fibres textiles," Schaerbeek-Brussels, Belgium. Filed Aug. 20, 1932. 5 claims. (Cl. 92-5.)

1,941,817. Process relating to the production of a material from vegetable matter of high pentosan containing pento-cellulose materials Orland R. Sweeney, Ames, and Charles E. Hartford, Dubuque, Iowa. Filed May 18, 1931. 15 claims. (Cl. 92-14.) Cooking corncobs, cornstalks, peanut shells, etc., and molding the mass.

1,941,957. Knife-carrier for paper cutting machines. Karl Stegmann, assignor to Johme-Werk Grafische Maschinen-Aktiengesellschaft, Bautzen, Germany. Filed July 12, 1930. 2 claims. (Cl. 164-58).

1,941,962. Manufacture of open space coated abrasive paper by the use of paraffin and other hydrophobic materials. Frank J. Tone, assignor to The Carborundum Company, Niagara Falls, N. Y. Filed Oct. 3, 1931. 4 claims. (Cl. 91-67.9.)

1,941,985. Composite sheeting. Harry E. Holcomb, assignor to Fiberfraks, Inc., New York, N. Y. Filed June 18, 1929. 5 claims. (Cl. 154-45.9.)

1,942,013. Insulating product. Louis Weber, East Chicago, Ind. Filed Oct. 4, 1929. 4 claims. (Cl. 154-44.) An asbestos fiber having a honeycomb structure.

1,942,095. Wood barking machine. Joseph Gruber, assignor to International Wood and Sulphite Company, Seattle, Wash. Filed May 8, 1931. 14 claims. (Cl. 144-208.)

1,942,146. Impregnated and superficially smoothed article. Leo Kollek and Wilhelm Engels, assignors to I. G. Farben-industrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Filed Dec. 4, 1930. 12 claims. (Cl. 91-68). Cellulose impregnated with a polymerized alkylene oxide.

1,942,159. Bag folding machine. Arno Andreas, Munster, Germany. Filed Aug. 14, 1930. 18 claims. (Cl. 93-28).

1,942,162. Heat insulation. Charles H. Campbell, Kent, Ohio. Filed Feb. 14, 1933. 8 claims. (Cl. 154-44).

1,942,168. Apparatus for producing perforated paper. John F. Hawley, assignor to Central Waxed Paper Company, Chicago, Ill. Filed Nov. 27, 1929. 12 claims. (Cl. 101-227).

1,942,287. Laminated board top or covering for furniture, etc. Alka T. A. Heitz, Walden, N. Y. Filed Mar. 28, 1932. 2 claims. (Cl. 154-43).

1,942,303. Screen. Orrie J. Mills, Hudson Falls, and William G. Webb, Glens Falls, N. Y. Filed June 6, 1932. 10 claims. (Cl. 92-32).

1,942,345. Manufacture of paper bottles. Carl Ristow, Berlin, Germany. Filed Dec. 22, 1932. 9 claims. (Cl. 92-39).

1,942,354. Article of manufacture. William R. Collings and Donald L. Gibb, assignors to The Dow Chemical Company, Midland, Ohio. Filed Dec. 11, 1930. 8 claims. (Cl. 154-52). Composite reinforced sheet.

1,942,357. Sheet winding machine. George E. Gibbs, assignor to American Reinforced Paper Company, Attleboro, Mass. Filed May 16, 1931. 10 claims. (Cl. 242-66).

1,942,383. Method for coating paper and the like. Charles A. Dickhaut and Charles C. Willis, New Brunswick, N. J. Filed May 10, 1932. 15 claims. (Cl. 91-68). Method of roll coating.

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1,942,438. Paper product. George J. Manson, assignor to Manson Chemical Company, a Corporation of New Jersey. Filed May 2, 1930. 17 claims. (Cl. 92-21). A paper sized with a composition containing a wax, an organic dispersion agent and an organic stabilizing agent.

1,942,521. Paper cutter. William L. Valiquette, assignor to Harris-Seybold-Potter Company, Dayton, Ohio. Filed July 26, 1930. 17 claims. (Cl. 164-59).

1,942,622. Paper manufacture. John Traquair and Francis G. Rawling, assignors to The Mead Corporation, Dayton, Ohio. Filed Apr. 27, 1928. 25 claims. (Cl. 8-2). Process consists in moving dewatered fibrous material and a continuously maintained gaseous chlorinating agent relatively to each other through a treating chamber and washing out the excess of the chlorinating agent.

1,942,675. Wood chipping machine. Carl Wigger and Reinold Bömcke, Unna, Germany. Filed Nov. 28, 1930. 5 claims. (Cl. 83-75).

1,942,685. Sulphite pulp digester systems. Andreas Christensen, assignor to Fibre Making Processes, Inc., Chicago, Ill. Filed June 16, 1932. 18 claims. (Cl. 92-7). Method of liquor circulation.

1,942,706. Process for protecting fiber products. Fergus A. Irvine, New Orleans, La. Filed May 12, 1932. 4 claims. (Cl. 92-40). Introduction of a toxic substance into a fibrous felted product.

1,942,723. Composite panel and method of producing the same. Treadway B. Munroe and Elbert C. Lathrop, assignors to The Celotex Company, Chicago, Ill. Filed June 29, 1929. 4 claims. (Cl. 154-2).

1,942,733. Flexible sheet insulation and method of producing the same. George D. Shaver, assignor to Therminsul Corporation of America, Boston, Mass. Filed Oct. 20, 1931. 9 claims. (Cl. 154-28).

1,942,760. Process for making pulp from fibrous material. Otto Kreissler, assignor to American Lurgi Corporation, New York, N. Y. Filed Sept. 30, 1932. 14 claims. (Cl. 92-7). Sulphite pulp process, using a quantity of liquor which is smaller than usual by the amount that would be lost in the blowing off and irrigating the wood above the level of the liquor.

1,942,763. Process for marking felt and the resultant product. William R. Menshon, assignor to The Barrett Company, New York, N. Y. Filed July 24, 1931. 15 claims. (Cl. 91-67.9). Bituminous saturated base having indicia thereon.

1,942,855. Method of and apparatus for treating and handling material. John L. Cooney, Erie, Pa. Filed Dec. 18, 1931. 17 claims. (Cl. 92-1). Method of treating rags with water before introduction into a beater.

1,942,870. Paper-sorting machine. Louis Landaff Matthews, assignor to Charles B. Maxson and Julian W. Maxson, Westerly, R. I. Filed Jan. 14, 1930. 13 claims. (Cl. 93-93).

1,942,977. Treatment of wood, fiber board, wood pulp, wood fiber and the like. Ernest Edward Munro Payne, Narborough, near Leicester, England. Filed June 29, 1933. 6 claims. (Cl. 91-68). Method of fireproofing with phosphates.

1,942,989. Heat insulating product. George Miller Thomson, Caledonia, Ontario, Canada. Filed Mar. 6, 1931. 3 claims. (Cl. 154-44).

1,943,147. Process for the manufacture of two-part boxes. Johannes Schmiedel, assignor to "Universelle" Cigarettenmaschinen-Fabrik, J. C. Muller and Co., Dresden, Germany. Filed Nov. 24, 1931. 18 claims. (Cl. 93-39).

1,943,221. Cellulose digester. Fritz Kruger, assignor to Zellstofffabrik Waldhof, Mannheim-Waldhof, Germany. Filed Nov. 5, 1931. 2 claims. (Cl. 92-7). The digester has fluid conduits for the pump-operated circulation on the digesting lye.

1,943,257. Method of accelerating the saturation of fabric based sheets with bituminous material. Norman P. Harshberger, assignor to Bakelite Building Products Co., Inc., New York, N. Y. Filed Apr. 11, 1930. 5 claims. (Cl. 91-68). Composition roofing.

1,943,258. Method of producing building material. Norman P. Harshberger, assignor to Bakelite Building Products Co., Inc., New York, N. Y. Filed Sept. 20, 1930. 1 claim. (Cl. 91-70). Roofing.

1,943,264. Method of making manifold paper webs. Louis M. Snyder, assignor to George Schorling, Woodridge, N. J. Filed Oct. 29, 1929. 13 claims. (Cl. 270-18).

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1,943,289. Digester system. Andreas Christensen, assignor to Fibre Making Processes, Inc., Chicago, Ill. Filed Dec. 10, 1932. 12 claims. (Cl. 92-7). A digester system containing several digesters, each with its own circulating system and also systems for selectively delivering liquor from one digester to the others.

1,943,345. Recovery of ammonia from cook liquor. Roger W. Richardson, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Apr. 16, 1931. 2 claims. (Cl. 23-193). The ammonium bisulphite liquor is made alkaline and brought into intimate contact with air.

1,943,450. Apparatus for staining the margins of sheet blanks. Edward J. Molyneaux, assignor to The Diamond Match Company, Baltimore, Md. Filed Feb. 16, 1933. 12 claims. (Cl. 91-46).

1,943,454. Apparatus for staining the margins of sheet blanks. Michael Paridon, assignor to The Diamond Match Company, Baltimore, Md. Filed Aug. 31, 1932. 12 claims. (Cl. 91-46).

1,943,455. Machine for making book matches. Michael Paridon, assignor to The Diamond Match Company, Baltimore, Md. Filed Feb. 16, 1933. 4 claims. (Cl. 93-2).

1,943,489. Process and apparatus for digesting fibrous material. Otto C. Schoenwerk, assignor to Chemipulp Process, Inc., Watertown, N. Y. Filed May 4, 1932. 27 claims. (Cl. 92-7). Method of circulating liquor.

1,943,500. Apparatus for handling sheets and the like. Alfred Winkler and Max Dunnebier, Neuwied, Germany. Filed Aug. 23, 1930. 8 claims. (Cl. 93-93). Handling and stacking mechanism.

1,943,501. Manufacture of paper tubes. Watson H. Woodford, assignor to Remington Arms Company, Inc., Bridgeport, Conn. Filed Nov. 15, 1929. 9 claims. (Cl. 93-94).

1,943,549. Bag making machine. George W. Poppe, assignor to Equitable Paper Bag Co., Inc., Brooklyn, N. Y. Filed May 16, 1931. 7 claims. (Cl. 93-18).

1,943,663. Tile board and method of manufacturing same. Richard Ericson, assignor to United States Gypsum Company, Chicago, Ill. Filed Oct. 30, 1929. 12 claims. (Cl. 154-2). Cover sheet applied to plaster board by means of a plastic material and ornamental groove added.

1,943,752. Shredding apparatus. Francis M. Wick, Toronto, Ontario, Canada. Filed Sept. 6, 1932. 1 claim. (Cl. 282-28).

1,943,752. Shredding apparatus. Francis M. Wick, Youngstown, Ohio. Filed June 12, 1933. 9 claims. (Cl. 164-68). Shredder for paper.

1,943,757. Soundproof board and process of making same. John H. Delaney, assignor to estate of Ada W. Delaney, Los Angeles, Calif. Filed May 13, 1930. 5 claims. (Cl. 154-2).

1,943,975. Water repellent size for fiber products. Elbert C. Lathrop and Fergus A. Irvine, assignors to The Celotex Company, Chicago, Ill. Filed Nov. 6, 1930. 8 claims. (Cl. 92-21). Ferric salts are used as the size precipitant, the amount depending on the color desired.

1,943,985. Method and machine for making envelopes of the open type. Abraham Novick, assignor to F. L. Smithe Co., Inc., New York, N. Y. Filed June 12, 1930. 16 claims. (Cl. 93-62).

1,944,093. Smoothing roll in paper machines. Roy W. Naggart, Hamilton, Ohio. Filed March 14, 1933. 5 claims. (Cl. 92-68).

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1,944,147. Bag making and filling machine. John P. Aldrich, Toledo, Ohio. Filed Apr. 4, 1931. 24 claims. (Cl. 93-3).

1,944,280. Fabricated board. George C. Snyder, assignor to The Guardian Trust Company, Cleveland, Ohio. Filed Apr. 26, 1927. 10 claims. (Cl. 154-55).

1,944,282. Laminated board and method of making the same. George C. Snyder, assignor to The Guardian Trust Company, Cleveland, Ohio. Filed Mar. 10, 1928. 10 claims. (Cl. 154-2).

1,944,532. Machine for making laundry bags. Melvin H. Sidebotham, assignor to Specialty Automatic Machine Company, Chelsea, Mass. Filed Sept. 5, 1931. 14 claims. (Cl. 93-76).

1,944,533. Artificial board and method of forming the same. Clarence J. Strobel, assignor to St. Clair Rubber Company, Detroit, Mich. Filed Sept. 12, 1932. 5 claims. (Cl. 154-40).

1,944,781. Slitting device. James A. Cameron, assignor to Cameron Machine Company, Brooklyn, N. Y. Filed Aug. 27, 1930. 7 claims. (Cl. 164-65).

1,944,794. Method for the continuous production of envelopes, etc. Friedrich Klinger, Hamburg, Germany. Filed July 16, 1932. 4 claims. (Cl. 93-63).

1,944,835. Making filled surface paper. Charles F. Boyers, assignor to The Champion Coated Paper Company, Hamilton, Ohio. Filed Mar. 22, 1933. 7 claims. (Cl. 91-68).

1,944,836. Apparatus for disseminating solids in liquids. Edwin Cowles, assignor to Cowles Engineering Corporation. Sewaren, N. J. Filed Mar. 29, 1933. 10 claims. (Cl. 92-20).

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1,944,886. Paper making. Charles I. Goessmann, by Anna M. D. Goessmann, executrix, Brooklyn, N. Y. Filed Apr. 6, 1933. 27 claims. (Cl. 154-2). Process of making indurated paper.

1,944,895. Corrugated sheathing and process of forming same. John W. Liedeboer, assignor to Ambler Asbestos Shingle and Sheathing Company, Ambler, Pa. Filed March 11, 1931. 5 claims. (Cl. 154-33).

1,944,906. Absorbent felt and artificial leather product made therefrom. George L. Schwartz, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del. Filed June 9, 1932. 18 claims. (Cl. 92-20). Unpurified pulp of pentosan content of more than 5 per cent is hydrated with water.

1,944,907. Impregnated paper product. Frank H. McCormick and George L. Schwartz, assignors to E. I. du Pont de Nemours and Company, Wilmington, Del. Filed April 1, 1933. 19 claims. (Cl. 92-40). Pulp impregnated with a mixture of drying oil and bituminous material.

1,944,970. Continuous method of making sheet cellulose tubes. Otto W. Dieffenbach, Baltimore, Md. Filed July 29, 1933. 5 claims. (Cl. 93-94).

1,945,024. Packing material for fragile articles. William D. Coil and William J. De Reamer, assignors to Mapes Consolidated Manufacturing Company, Griffith, Ind. Filed Apr. 21, 1930. 3 claims. (Cl. 154-55). A packing board of molded pulp.

1,945,118. Paper machine and method of handling the trim from the paper machine wire. Hector McVicker and Edwin F. Bearce, assignors to The Chillicothe Paper Company, Chillicothe, Ohio. Filed March 13, 1933. 14 claims. (Cl. 92-39).

1,945,173. Artificial leather manufacture. Frank O. Woodruff, assignor to Beckwith Manufacturing Company, Boston, Mass. Filed July 27, 1932. 13 claims. (Cl. 92-41). Multi-ply sheet of fibers containing rubber latex.

1,945,202. Refined cellulose fiber. George A. Ruchter, assignor to Brown Company, Berlin, N. H. Filed Sept. 17, 1931. 3 claims. (Cl. 92-3). A bleached cellulose pulp of hemp, jute, china grass, ramie, manila and sisal, with an alpha cellulose content of at least 93 per cent.

1,945,205. Paper manufacture. Lloyd D. Smiley, assignor to Chemipulp Process, Inc., Watertown, N. Y. Filed Nov. 15, 1929. 20 claims. (Cl. 92-7). Digester system.

1,945,243. Machine for placing paper linings in molds. Thomas D. Watkins, Utica, and Benjamin A. Slocum, Binghamton, N. Y.; said Slocum assignor to said Watkins. Filed Apr. 2, 1932. 12 claims. (Cl. 93-36).

1,945,306. Machine and method for producing wall board. John Dean, San Francisco, Calif. Filed May 24, 1932. 10 claims. (Cl. 154-1).

1,945,308. Construction material. Albert C. Fischer, assignor to The Philip Carey Manufacturing Company, Cincinnati, Ohio. Filed Aug. 21, 1926. 5 claims. (Cl. 154-44). Multiple layer resilient, board-like strip, comprising a core of superimposed bituminized sheets and surface layers for covering.

1,945,492. Pulp strainer. Marcel Lamort, assignor to Etablissements E. & M. Lamorts Fils, Vitry-le Francois, France. Filed June 4, 1932. 6 claims. (Cl. 92-35).

1,945,504. Treatment of digester liquors. Albert D. Merrill, Watertown, N. Y. Filed July 15, 1932. 22 claims. (Cl. 92-11). Indirect heat exchanger for digester.

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1,945,537. Artificial fabric. George L. Schwartz, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del. Filed May 31, 1930. 6 claims. (Cl. 92-21). Sheet of artificially crinkled, fibrous cellulosic material having starch absorbed therein.

1,945,538. Artificial fabric. George L. Schwartz, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del. Filed May 31, 1930. 8 claims. (Cl. 92-40). A web of artificially crinkled fibrous cellulosic material impregnated with rubber latex coagulated therein.

1,945,624. Taped paper board. Joshua Wagner, assignor to Diagonal Corrugated Patent Corporation, Brooklyn, N. Y. Filed Aug. 13, 1931. 8 claims. (Cl. 154-33). Paper board having interleaved between certain of said sheets a tape strip running along a side edge of the board and projecting laterally beyond such side edge.

1,945,686. Process for producing wall papers from peeled wood veneers. Heinrich Albert Hellmers, Kiel, Germany. Filed Jan. 31, 1933. 3 claims. (Cl. 154-2).

1,945,700. Apparatus for applying adhesive preparations. Raymond J. O'Brien and Eardley Hazell, assignors to The Naugatuck Chemical Company, Naugatuck, Conn. Filed Nov. 18, 1930. 12 claims. (Cl. 154-1).

1,945,703. Paper-cutting machine. William M. Reichart, assignor to The Chandler and Price Company, Cleveland, Ohio. Filed June 17, 1932. 11 claims. (Cl. 164-58).

1,945,714. Process of impregnating porous material with solid substances. Alexander Winogradow, New York, N. Y. Filed July 22, 1930. 9 claims. (Cl. 91-68). Process of impregnating with a salt.

1,945,761. Doctor for paper-making machinery. Frederick William Vickery, assignor to Vickery Incorporated, a Corporation of Massachusetts. Filed July 27, 1932. 7 claims. (Cl. 92-74).

1,945,862. Manufacture of paper pulp. Aimwell Gordon MacIntyre, assignor to A. E. Staley Manufacturing Company, Decatur, Ill. Filed Aug. 7, 1930. 10 claims. (Cl. 92-9). Cooking wood in the presence of a dispersing colloid other than that contained in wood.

1,945,988. Freeness indicator and recorder. George Stanford Witham, Jr., Lincoln, N. H. Filed June 15, 1932. 15 claims. (Cl. 92-38).

1,946,056. Apparatus for forming wall board into bundles. Charles R. Birdsey, assignor to United States Gypsum Co., Chicago, Ill. Filed July 30, 1928. 20 claims. (Cl. 216-9).

1,946,141. Wrapping paper. Walter W. Herrick, assignor to Riegel Paper Corporation, Riegelsville, N. J. Filed Apr. 1, 1932. 6 claims. (Cl. 92-21). A heat-sealing opaque wrapping paper for foodstuffs; loaded with titanium dioxide and a coating of wax applied directly to one or both sides.

1,946,198. Method of and machine for manufacturing paper cones. Charles K. Danlap, assignor to Sonoco Products Company, Hartsville, S. C. Filed Mar. 21, 1933. 8 claims. (Cl. 93-79).

1,946,203. Coated paper and process of producing same. Charles L. Gabriel, assignor to Commercial Solvents Corporation, Terre Haute, Ind. Filed July 2, 1931. 20 claims. (Cl. 91-68). Paper treated with a cellulose ester.

1,946,204. Coated paper and process of producing same. Charles L. Gabriel, assignor to Commercial Solvents Corporation, Terre Haute, Ind. Filed July 2, 1931. 20 claims. (Cl. 91-68). Paper coated with a cellulose ester.

1,946,205. Coated paper and process of producing same. Charles L. Gabriel, assignor to Commercial Solvents Corporation, Terre Haute, Ind. Filed July 2, 1931. 18 claims. (Cl. 91-68). Paper coated with a cellulose ester.

1,946,338. Tracing paper and method of producing. Harold M. Spurlin, assignor to Hercules Powder Company, Wilmington, Del. Filed Sept. 11, 1929. 1 claim. (Cl. 91-68). Thin sheet impregnated with and having a thin surface coating comprising a composition containing nitrocellulose and a plasticizer.

1,946,347. Hollander. Helmut Banning. Duren, Germany. Filed Oct. 2, 1930. 2 claims. (Cl. 92-25).

1,946,437. Art of producing molded pulp articles. Merle P. Chaplin, assignor to Fidelity Trust Company, Portland, Me. Filed Oct. 13, 1928. 21 claims. (Cl. 92-56).

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1,946,508. Antitarnishing material for silverware and other metals and process of producing the same. Arthur E. Thurber and Raymond H. Sholtz, assignors to Oneida Community, Limited, Oneida, N. Y. Filed Dec. 9, 1931. 10 claims. (Cl. 92-21). Paper is treated with a soluble copper compound to render the sulphur compounds inactive.

1,946,801. Shaking mechanism for fourdrinier machines. Frank M. Sanger, assignor to The Bagley & Sewall Company, Watertown, N. Y. Filed Aug. 4, 1932. 21 claims. (Cl. 92-45).

1,946,801. Riding roller for paper making machines. Bernard A. Malkin, Lachine, Quebec, and Frank McHenry, Beaupre, Quebec, Canada. Filed Feb. 5, 1930. 2 claims. (Cl. 242-66).

1,946,831. Apparatus for coating paper or the like. Russell S. Bracewell, South Hadley, Mass. Filed Dec. 11, 1931. 8 claims. (Cl. 91-44).

1,946,838. Embossing attachment for paper making machines. Austin E. Cofrin, Green Bay, Wis. Filed June 13, 1932. 12 claims. (Cl. 92-68).

1,946,932. Laminated product. Robert P. Courtney, assignor to Bakelite Corporation, New York, N. Y. Filed June 8, 1929. 3 claims. (Cl. 154-40).

1,946,952. Process for producing synthetic lumber that is not attacked by molds. Orland R. Sweeney, assignor to Iowa State College of Agriculture and Mechanical Arts, Ames, Iowa. Filed Apr. 13, 1931. 5 claims. (Cl. 92-21). Comminuted cornstalks are treated with copper sulphate and pressed into lumber.

1,946,953. Process for producing synthetic lumber that is not attacked by molds. Orland R. Sweeney, assignor to Iowa State College of Agriculture and Mechanical Arts, Ames, Iowa. Filed Apr. 16, 1931. 3 claims. (Cl. 92-40). Lumber from cornstalks is sprayed with copper sulphate while said lumber is still warm from drying.

1,947,103. Method of producing absorbent or resilient felt. Joseph E. Plumbstead, assignor to The Jessup & Moore Paper Company, Philadelphia, Pa. Filed Aug. 22, 1931. 76 claims. (Cl. 92-9).

1,947,104. Fibrous felting or felted paper product and process of making same. Joseph E. Plumbstead, assignor to The Jessup & Moore Paper Company, Philadelphia, Pa. Filed Sept. 9, 1932. 14 claims. (Cl. 92-21). Artificially curles or kinked copper compound impregnated cellulose fibers are treated with ammonia to form a mucilaginous coating.

1,947,105. Method of producing absorbent of resilient felt. Joseph E. Plumbstead, assignor to The Jessup & Moore Paper Company, Philadelphia, Pa. Filed Aug. 19, 1931. 8 claims. (Cl. 92-0). Pulp is treated with sodium sulphide solution, producing kinking, curling or crimping of the fibres.

1,947,106. Method of producing absorbent felts. Joseph E. Plumbstead, assignor to The Jessup & Moore Paper Company, Philadelphia, Pa. Filed Aug. 19, 1931. 22 claims. (Cl. 92-13).

1,947,107. Method of producing absorbent or resilient felt. Joseph E. Plumbstead, assignor to The Jessup & Moore Paper Company, Philadelphia, Pa. Filed Sept. 4, 1931. 41 claims. (Cl. 92-13).

1,947,108. Method of producing absorbent and resilient felt. Joseph E. Plumbstead, assignor to The Jessup & Moore Paper Company, Philadelphia, Pa. Filed Sept. 5, 1931. 8 claims. (Cl. 92-13).

1,947,205. Paper manufacturing machine. Edward T. Jeager, assignor to Oneida Paper Products Incorporated, Brooklyn, N. Y. Filed Dec. 21, 1932. 5 claims. (Cl. 164-12).

1,947,307. Means for supporting wire cloth. Harold Robert Rafton, assignor to Rafton Engineering Corporation, Andover, Mass. Filed Jan. 21, 1931. 11 claims. (Cl. 209-401).

1,947,323. Method of shredding paper and the like. William J. Winston, assignor to Mitts and Merrill, Saginaw, Mich. Filed Nov. 21, 1932. 1 claim. (Cl. 164-17).

1,947,396. Machine for making paper bags. Roy W. Jaite, Lakewood, Ohio. Filed June 19, 1931. 5 claims. (Cl. 271-64).

1,947,440. Beater roll. Samuel Milne, Edinburgh, Scotland. Filed July 21, 1933. 3 claims. (Cl. 92-22).

FEBRUARY 20, 1934.

1,947,451. Copperized paper. William R. Barber, Albert G. Natwick and Maurice W. Phelps, assignors to Crown Willamette Paper Company, San Francisco, Calif. Filed Oct. 3, 1932. 5 claims. (Cl. 92-21). Paper contains copper ortho-phenylphenate preciptate.

1,947,452. Resinate copperized paper. William R. Barber, Albert G. Natwick and Maurice W. Phelps, assignors to Crown Willamette Paper Company, San Francisco, Calif. Filed Oct. 3, 1932. 6 claims. (Cl. 92-21). The paper contains a predetermined amount of copper resinate precipitate.

1,947,561. Box machine. Nicholas Marcalus,

assignor to Automatic Paper Machinery Co., Inc., Elizabeth, N. J. Filed Feb. 27, 1931. 5 claims. (Cl. 93-51).

1,947,636. Paper making machinery. Earl E. Berry, assignor to Beloit Iron Works, Beloit, Wis. Filed Nov. 25, 1932. 11 claims. (Cl. 92-53). The method of making a perforated rubber surfaced roll.

1,947,644. Shell lining for jordan engines. Frank M.. Gloyd, assignor to Simonds Worden White Company, Dayton, Ohio. Filed June 17, 1931. 16 claims. (Cl. 92-27). A series of radially disposed metal knives separated by metal strips whose edges abut and are welded to the sides of the knives intermediate their edges.

1,947,664. Lined moisture-proof carton and method of making same. Edwin G. Staude, Minneapolis, Minn. Filed Aug. 27, 1931. 12 claims. (Cl. 93-36).

1,947,707. Blow pit and method of operating the same. Hobart W. French, assignor to Hammermill Paper Company, Erie, Pa. Filed May 26, 1932. 23 claims. (Cl. 92-7).

1,947,788. Sound absorbing panel. Brouwer D. McIntyre, assignor to Insulation Development Corporation, Monroe, Mich. Filed Jan. 18, 1932. 2 claims. (Cl. 154-44).

1,947,888. Process and apparatus for the manufacture of pulp. Carl Busch Thorne, Hawkesbury, Ontario, Canada. Filed Apr. 23, 1932. 6 claims. (Cl. 92-7). Method of forming a filter in a blow pit.

1,947,889. Process and apparatus for the manufacture of pulp. Carl Busch Thorne, Hawkesbury, Ontario, Canada. Filed Apr. 27, 1933. 8 claims. (Cl. 92-7). Method of heat recovery from digester and blow pit.

1,947,900. Apparatus for refining paper stock. Judson A. De Cew, Mount Vernon, N. Y. Filed June 25, 1931. 3 claims. (Cl. 92-27). Design so that the area of the free space between the plugs and shell at the larger outlet end is less than the area of the free space between the plug and shell at the smaller inlet end.

1,948,189. Wood grinding machine. Andrew N. Russell and John D. Robb, Lachine, Quebec, Canada. Filed Feb. 27, 1930. 8 claims. (Cl. 83-75). Continuous feed type.

1,948,314. Manufacture of paper utensils. Lester A. Pratt and George E. Gould, assignors to Merrimac Chemical Company, Everett, Mass. Filed May 6, 1931. 6 claims. (Cl. 18-47.5). Means of waterproofing paper.

1,948,334. Adhesive and method of applying the same. John E. Clegg, assignor to The Arabol Manufacturing Company, New York, N. Y. Filed Dec. 4, 1931. 8 claims. (Cl. 87-17). Adhesive for cellophane).

1,948,411. Endless belt and seam construction therefor. Eduard v. Asten, Eupen, Belgium. Filed Jan. 23, 1931. 6 claims. (Cl. 24-33). Multiply woven drier felt for paper machines.

1,948,442. Sized paper carrying a synthetic resin of petroleum origin and process of making same. Carleton Ellis, assignor to Standard Oil Development Company, Linden, N. J. Filed Sept. 24, 1931. 12 claims. (Cl. 92-21). Paper containing a synthetic super-resin of petroleum origin.

FEBRUARY 27, 1934.

1,948,657. Liner folding device. John Lee Ferguson, assignor to J. I. Ferguson Company, Joliet, Ill. Filed July 23, 1930. 20 claims. (Cl. 93-2)

1,948,858. Lignin derivatives and process of making same. Guy C. Howard, Wausau, Wis. Filed Apr. 11, 1933. 17 claims. (Cl. 260-158). Lignin-sulphonic acid in dispersion is heated to remove sulphur dioxide.

1,948,874. Process for treating paper. Leon M. Yoerg, assignor to American Writing Paper Company, Inc., Holyoke, Mass. Filed July 7, 1931. 6 claims. (Cl. 92-40).

1,948,979. Weather resisting material. Philip W. Codwise, assignor to Certain-Teed Products Corporation, New York, N. Y. Filed June 27, 1932. 12 claims. (Cl. 92-3). A sheet of felt containing a substantial amount of soda pulp and a waterproofing saturant.

1,949,000. Process for recuperating rosin size already applied to papers. Shigenari Yano, Fujimachi, Fujigun, Shizuokaken, Japan. Filed Sept. 16, 1932. 2 claims. (Cl. 92-1). Rosin-sized paper is submitted to steaming at 55-100° C.

1,949,087. Insulating material. Merrill D. Squiers, Kalamazoo, Mich. Filed June 20, 1932. 4 claims. (Cl. 92-21). Mineral wool and asphalt.

1,949,091. Paper cutter and process of cutting paper. William L. Valiquette, assignor to The Harris-Seybold-Potter Company, Dayton, Ohio. Filed July 26, 1930. 21 claims. (Cl. 164-48).

1,949,125. Apparatus for drying paper. Frank C. Ladd, Turners Falls, Mass. Filed Apr. 4, 1931. 7 claims. (Cl. 34-48). Method of loft drying.

1,949,188. Manufacture of paper. Daniel A. Smith, assignor to District of Columbia Paper Manufacturing Company, Washington, D. C. Filed May 8, 1930. 10 claims. (Cl. 92-43). Method of securing sheets of selected width.

1,949,237. Web tensioning apparatus. Donald B. Bradner, assignor to The Champion Coated Paper Company, Hamilton, Ohio. Filed July 8, 1932. 4 claims. (Cl. 91-43). Use of suction rolls.

1,949,249. Fibrous composition and process of manufacture. Harry C. Fisher, assignor to The Richardson Company, Lockland, Ohio. Filed Oct. 23, 1928. 16 claims. (Cl. 92-21). Method of adding an adhesive binder to watery pulp.

1,949,255. Corrugated board. Charles L. Keller, assignor to The Richardson Company, Lockland, Ohio. Filed July 2, 1928. One claim. (Cl. 154-55).

1,949,273. Bag making machinery. Burpee D. Greenlaw, assignor to The Brown Bag Filling Machine Company, Fitchburg, Mass. Filed Aug. 6, 1931. 31 claims. (Cl. 93-76).

1,949,330. Apparatus for treating and seasoning paper. William Russell Redd, Western Springs, Ill. Filed Mar. 8, 1932. 2 claims. (Cl. 93-1). The web is converted into individual folded articles, the paper being bleached, sterilized and deodorized.

MARCH 6, 1934.

1,949,419. Apparatus for applying an adhesive surface to a web. John A. Johnson, Brooklyn, N. Y. Filed Aug. 29, 1929. 6 claims. (Cl. 154-37).

1,949,420. Method of applying an adhesive surface to a web. John A. Johnson, Woodhaven, N. Y. Filed July 19, 1932. 5 claims. (Cl. 154-40).

1,949,472. Apparatus for making fibrous materials. Ernest Hopkinson, assignor to The Naugatuck Chemical Company, Naugatuck, Conn. Filed Apr. 5, 1930. 6 claims. (Cl. 92-60). Apparatus for compacting a mass of fibrous material.

1,949,495. Box folding machine. Paul R. Simmons, assignor to Indiana Fibre Products Company, Marion, Ind. Filed July 18, 1932. 33 claims. (Cl. 93-49).

1,949,534. Method of and apparatus for hydrating cellulose pulp. William T. Doyle, assignor to Sturtevant Mill Company, Boston, Mass. Filed May 8, 1933. 11 claims. (Cl. 92-20). Use of a rotary hammer mill whose discharge opening is restricted.

1,949,549. Refined cellulose pulp. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed Aug. 16, 1932. 4 claims. (Cl. 92-3). Alkali-liberated and -refined pulp having an alpha cellulose content of at least 93 per cent and whose tear resistance is at least about 50 per cent greater than that of the unrefined pulp.

1,949,619. Glossimeter. August Herman Pfund, Baltimore, Md. Filed Sept. 16, 1932. 7 claims. (Cl. 88-23). Apparatus for testing gloss.

1,949,669. Apparatus for treating fibrous material. Sidney D. Wells, Combined Locks, Wis. Filed June 20, 1932. 10 claims. (Cl. 92-7). Apparatus for feeding liquor from a tank to a digester at a controlled rate.

1,949,692. Plaster board. Louis Pavesi, San Francisco, Cal. Filed Aug. 3, 1933. 2 claims. (Cl. 154-45.9). Wall board comprising a plaster board having embedded therein a reinforcing element and bamboo stalks respectively.

1,949,868. Machine for removing waterproof coatings. Carl W. Keuffel, assignor to Keuffel & Esser Company, Hoboken, N. J. Filed July 29, 1932. 15 claims. (Cl. 15-100).

1,949,879. Bag making machine. Adolph Potdevin, assignor to Potdevin Machine Company, Brooklyn, N. Y. Filed July 9, 1929. 41 claims. (Cl. 93-14).

1,949,880. Bag making machine. Adolph Potdevin, assignor to Potdevin Machine Company, Brooklyn, N. Y. Filed Oct. 30, 1930. 7 claims. (Cl. 93-33).

1,949,881. Delivery mechanism for bag machines. Adolph Potdevin, assignor to Potdevin Machine Company, Brooklyn, N. Y. Filed Apr. 12, 1932. 6 claims. (Cl. 271-64).

1,949,933. Sulphur burner. Glen H. Frantz, assignor to Grasselli Chemical Company, Cleveland, Ohio. Filed March 25, 1932. 1 claim. (Cl. 23-278). Rotary type burner for burning elemental sulphur.

1,949,997. Paper winder. Charles A. Fourness, assignor to Paper Patents Company, Neenah, Wis. Filed Nov. 16, 1931. 11 claims. (Cl. 242-65).

1,949,998. Dewatering apparatus. Hobart W. French, Erie, Pa. Filed Sept. 16, 1931. 8 claims. (Cl. 92-42). Cylinder mold.

1,950,032. Fabricated roofing element. Lester Kirschbraun, assignor to The Patent and Licensing Corporation, Boston, Mass. Filed July 20, 1929. 9 claims. (Cl. 91-68).

1,950,078. Method and means for disbarking long-cut lumber with the aid of disbarking drums. Frans Ejnar Berggren, Kramfors, Sweden. Filed Dec. 12, 1931. 10 claims. (Cl. 144-208). Method of floating logs in and out of a barking drum.

1,950,159. Paper winder. Earl E. Berry, assignor to Beloit Iron Works, Beloit, Wis. Filed Apr. 6, 1931. 21 claims. (Cl. 242-65).

1,950,279. Process of producing a water-repellent coating on paper or similar material. Alfred E. Van Wirt, assignor to Imperial Paper and Color Corporation, a Corporation of New York. Filed June 15, 1933. 13 claims. (Cl. 91-67.9). Protein material is applied to the surface of the web, the treated surface is printed and then sprayed with a liquid to form a water-insoluble compound.

1,950,351. Paper manufacture. James d'A. Clark and John E. Graves, assignors to The Mead Corporation, Dayton, Ohio. Filed Aug. 7, 1931. 20 claims. (Cl. 92-40). Method of drying sheet of paper containing additive material.

MARCH 13, 1934.

1,950,538. Device for handling rolls of paper. David G. Bernard, assignor to Franklin W. Kohler, Chicago, Ill. Filed June 29, 1931. 4 claims. (Cl. 242-68).

1,950,669. Fluid heated roll. James Gleason, Green Bay, Wis. Filed Aug. 20, 1931. 1 claim. (Cl. 257-95).

1,950,713. Paper machinery. Cliff R. Crawford, assignor to The Black Clawson Company, Hamilton, Ohio. Filed Sept. 8, 1931. 6 claims. (Cl. 92-22). Perforated backfall for beater.

1,950,853. Suction box for the manufacture of paper and similar products. Ernest Lamort, assignor to Société E. and M. Lamort Fils, Vitry-le-Francois, France. Filed May 16, 1933. 18 claims. (Cl. 92-51). Process for securing air tightness of the joint between the moving and the fixed parts in a suction box.

1,950,924. Method and apparatus for screening fibers in aqueous suspension. Henry Wyatt Johnston, Montreal, Quebec, Canada. Filed Nov. 2, 1932. 6 claims. (Cl. 92-30). The suspension is forcibly directed against the central portion of the screen and cause to flow over the screen in a steady, non-sinuous manner.

1,950,975. Opacimeter and method of measuring opacity. Myrl N. Davis, assignor to Paper Patents Company, Neenah, Wis. Filed Nov. 19, 1932. 10 claims. (Cl. 88-14).

1,951,004. Apparatus for drying coated paper. Charles C. Willis, assignor to John Waldron Corporation, New Brunswick, N. J. Filed Nov. 29, 1930. 1 claim. (Cl. 34-48). A drying chamber.

1,951,017. Method of treating chemical pulp. Raymond S. Hatch, assignor to Weyerhaeuser Timber Company, Tacoma, Wash. Filed July 20, 1933. 9 claims. (Cl. 92-30). Method of separating the medullary ray or other fibers of similar length from the longer longitudinal fibers, which consists in flowing the pulp downwardly over an inclined screen.

1,951,040. Envelope machine. Leo Stone, Brockton, and Fred W. McArdle, Boston, Mass.; said McArdle assignor to said Stone. Filed July 30, 1932. 20 claims. (Cl. 93-63).

1,951,084. Device for removing bark from logs. John M. Council, Wananish, N. C. Filed March 16, 1932. 8 claims. (Cl. 144-208).

1,951,167. Continuous process of wall board manufacture. Roland B. Respess and Newton A. Robbins, assignors to Respats, Inc., Cranston, R. I. Filed Jan. 4, 1933. 15 claims. (Cl. 92-20).

1,951,182. Four-drum winder. William August Bessmer and Amos James Aubin, assignors to Hammermill Paper Company, Erie, Pa. Filed April 15, 1930. 12 claims. (Cl. 242-66).

MARCH 20, 1934.

1,951,371. Apparatus for manufacturing match books. W. John Price and William Anscott, assignors to Oval Match Company, Inc., Brooklyn, N. Y. Filed Oct. 21, 1929. 26 claims. (Cl. 93-1).

1,951,389. Paper slitting and stacking device. Joseph F. Anthony, assignor to The National Cash Register Company, Dayton, Ohio. Filed July 22, 1932. 18 claims. (Cl. 164-62).

1,951,445. Manufacture of one-piece window envelope blanks. Ernest W. Sauerman, assignor to Transo Envelope Co., Chicago, Ill. Filed April 19, 1929. 41 claims. (Cl. 93-61).

1,951,471. Method and apparatus for making bags. Thomas Earl Coty, Watertown, N. Y. Filed Jan. 29, 1932. 7 claims. (Cl. 93-21).

1,951,519. Paper plup refining engine. Samuel Milne, Edinburgh, Scotland. Filed Aug. 26, 1933. 5 claims. (Cl. 92-26).

1,951,529. Cutting roller for paper and the like. William Harold Possnett, Cheadle Heath, Stockport, England. Filed Aug. 17, 1932. 1 claim. (Cl. 164-70).

1,951,620. Decalcomania paper. John Mac Laurin, Ware, Mass. Filed Sept. 21, 1931. 8 claims. (Cl. 41-33).

1,951,681. Waxing attachment for paper machines. Karl M. Thorsen, assignor to Central Paper Company, Muskegon, Mich. Filed Dec. 1, 1931. 9 claims. (Cl. 92-40).

1,951,684. Continuous pulp selector. Harold Donald Wells, Glens Falls, N. Y. Filed Sept. 3, 1932. 3 claims. (Cl. 92-39). A beater and pulp selector.

1,951,710. Process and apparatus for drying fibrous sheets. Arlie W. Schorger, assignor to Burgess Cellulose Company, Madison, Wis. Filed Nov. 12, 1931. 11 claims. (Cl. 92-39). Production of a relatively thick smooth-surfaced paper sheet.

1,951,714. Method of and apparatus for making paper. John D. Tompkins, Valatie, N. Y. Filed Aug. 11, 1931. 16 claims. (Cl. 92-38). Method of drying paper web.

1,951,715. Uniform speed reel. Charles W. Valentine and Alfred F. Helin, assignors to Bagley and Sewall Company, Watertown, N. Y. Filed July 23, 1931. 13 claims. (Cl. 242-65).

1,951,728. Manufacture of sheet material. Albert C. Fischer, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio. Filed July 30, 1925. 7 claims. (Cl. 106-31). Resilient construction materials.

1,951,940. Process for making thin pressed fibrous articles. George James Manson, Hawkesbury, Ontario, Canada. Filed Nov. 22, 1928. 12 claims. (Cl. 92-54).

1,951,983. Laminated board. William Platts Kellett, assignor to William Platts Kellett, Jr., New York, N. Y. Filed Dec. 24, 1931. 6 claims. (Cl. 20-91).

1,952,038. Process of extruding sheet material. Albert C. Fischer, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio. Filed Nov. 25, 1927. 9 claims. (Cl. 154-2). Extrusion of a heated waterproof binder and coarse fibrous material.

MARCH 27, 1934.

1,952,064. Finishing apparatus. Benjamin A. Franklin, Springfield, Mass. Filed July 15, 1932. 14 claims. (Cl. 92-68).

1,952,168. Fibrous article and method of and means for making the same. Jesse B. Hawley, Geneva, Ill. Filed June 29, 1931. 37 claims. (Cl. 92-57). Fibrous sound producing article.

1,952,169. Fibrous sound producing means and method of producing the same. Jesse B. Hawley, Geneva, Ill. Filed July 27, 1931. 19 claims. (Cl. 92-57).

1,952,172. Machine for operating upon box blanks. Cutler D. Knowlton, assignor to Hoague-Sprague Corporation, Lynn, Mass. Filed Nov. 23, 1931. 28 claims. (Cl. 93-58).

1,952,208. Fiber sheet and its manufacture. Erwin H. Hussey, Springfield, Ohio. Filed May 18, 1931. 9 claims. (Cl. 154-23). Method of coating fibers with a liquid adhesive and forming them into a sheet.

1,952,219. Construction material. Anthony J. Pfohl, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio. Filed March 25, 1929. 6 claims. (Cl. 72-124). A homogeneous mixture of bituminous, fibrous and mineral materials.

1,952,530. Method of and means for making leak-tight paper cans. Arthur H. Bedworth, assignor to Specialty Automatic Machine Company, Chelsea, Mass. Filed April 8, 1933. 18 claims. (Cl. 93-36).

1,952,642. Tanning preparations and method of making. Frederick J. Wallace, assignor to Robeson Process Company, New York, N. Y. Filed Sept. 7, 1932. 9 claims. (Cl. 149-4). Use of lignosulphonic acid and other solids from sulphite waste liquor.

1,952,643. Manufacture of tanning preparations. Frederick J. Wallace, assignor to Robeson Process Company, New York, N. Y. Filed Sept. 7, 1932. 8 claims. (Cl. 149-4). Use of lignosulphonic acid and other acids of sulphite waste liquor.

1,952,754. Reefing material and process for making same. Norman P. Harshberger, assignor to The Barrett Company, New York, N. Y. Filed May 14, 1931. 5 claims. (Cl. 91-68).

1,952,828. Method of making composition roofing. Charles Edward Volkhardt, assignor to The Barrett Company, New York, N. Y. Filed Nov. 14, 1928. 6 claims. (Cl. 154-2).

1,952,869. Receptacle making apparatus. Ellis L. Jones, assignor to American Sealcone Corporation, New York, N. Y. Filed May 31, 1932. 20 claims. (Cl. 93-79).

1,952,913. Web tensioning means. Charles A. Dickhaut, assignor to John Waldron Corporation, New Brunswick, N. J. Filed April 3, 1928. 1 claim. (Cl. 242-75).

1,952,931. Pulpwood rosser. Robert James Mac Donald, St. Stephen, New Brunswick, Canada, assignor of one-third to Edward J. Corrigan, Calais, Maine. Filed Sept. 29, 1932. 4 claims. (Cl. 144-208).

1,952,962. Tapered roofing shingle. Henry C. Avery, assignor to The Patent and Licensing Corporation, Boston, Mass. Filed May 26, 1930. 4 claims. (Cl. 108-8).

1,952,987. Process and machine for automatic manufacture of one-piece boxes. Günther Meyer-Jagenberg, Dusseldorf, Germany. Filed July 23, 1931. 22 claims. (Cl. 93-40).

1,953,022. Apparatus for bleaching pulp. Mathew F. McCombs, assignor to Niagara Alkali Company, Niagara Falls, N. Y. Filed Dec. 27, 1932. 1 claim. (Cl. 8-2). Apparatus for chlorine bleaching.

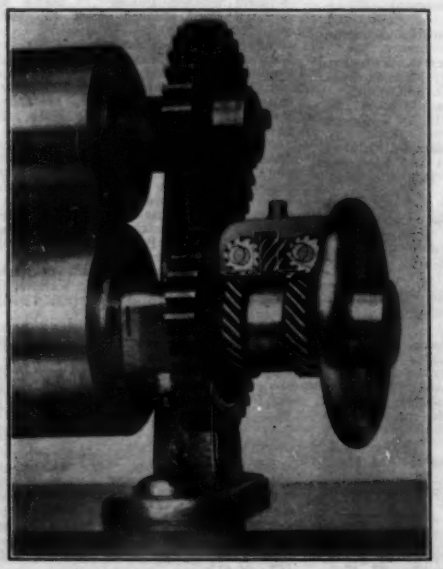
Lodding Positive Speed Corrector

Considerable work has been recently done in the application of differential drives to bottom and top press rolls. The problem of a slipping top press roll is one of long standing, and various devices have been developed to overcome the slipping action with various degrees of success.

The recent application, however, of spur or bevel gear planetary differentials has met with considerable success in certain cases, but in other cases with utter failure. The reason for the uncertain results which may be obtained with the ordinary type of planetary gears is that this type of differential is based upon the resistance offered by each press roll.

In the case of a board machine, for instance, where a top as well as a bottom felt is wrapped around the rolls and the load on each felt is about equal, the ordinary type of differential will operate properly. However, if the load on the top roll is much greater than the load on the bottom roll, or vice-versa, there is no telling what may happen, as in extreme cases the writer has seen the presses stop entirely and the top roll would simply spin around. This action is very similar to that of an automobile having one wheel on ice and the other on solid ground. The wheel having the least resistance will spin around and the other on firm ground will be stationary.

In order to overcome this difficulty, a differential must be designed which would not act on the same principle, i.e. resistance offered, but rather act upon the principle of distance travelled. This type of differential has been developed by F. W. Lodding, President and Treasurer of the Lodding Engineering Corporation, and has been applied to a number of paper machines with considerable success.



LODDING POSITIVE SPEED CORRECTOR

The construction of this differential is of such a nature that it is impossible for one roll to turn without the other roll also turning. The drive consists of two helical gears, one driving the top roll and the other the bottom roll. Each of these two large gears is driven by a helical pinion carried on the differential spider. These pinions are connected by a vertical helical pinion of the same size. The drive works as follows:—

The differential spider containing the helical pinions is driven from the intake shaft of the presses. Through the pinions, power is transmitted to both the large helical gears, which in turn rotate the top and bottom press rolls. Due to the construction and combination of gears, they all being 45 degree helicals, it is impossible to transmit motion to one roll only, as the entire combination acts like a self-locking worm gear similar to that used in elevator practice. It is, however, possible to turn one of the large gears faster or slower than the other large gear, which of course is necessary in obtaining a differential action, but it is impossible to turn the differential spider and transmit extra motion to either one of the large gears.

The technical reason for the unit working as described above is a combination of factors. One factor is the direction of rotation of the pinions and gears. The tendency of the differential spider when driving both large gears is to lock itself, very much similar in action to a self-locking worm and worm gear. As there are two sets of pinions, there will be eight points of contact. The efficiency of each pinion and gear is not more than 80 per cent. Having eight contacts, the overall efficiency is .8 in the eighth power, which equals 16 per cent. Due to friction and other considerations, the overall efficiency of one roll turning against the other would perhaps be 5 per cent, which equals that of a self-locking worm and worm gear combination.

The action as described above is that of the differential spider trying to turn one roll against the other and from actual models it has been found to be so, and in practice has been further proven. At one mill there was a long bottom felt carrying a considerable load. This machine was also very wide, being in the vicinity of 150". (The top roll was raised clear of the bottom roll by ⅛ inch.) The top roll had no felt whatsoever and was simply running idle. The machine was started up and the top roll was found to rotate the same speed as the bottom roll. It was then gently lowered, and there was no disturbance of felts or any vibrations whatsoever.

Effect of Chip Length in Sulphite Pulping*

By J. N. McGovern[1], and G. H. Chidester[2]

Abstract

Sulphite digestions of western hemlock heartwood chips varying in length from ⅛ inches to 1-⅛ inches gave the following indications: (1) The time of penetration increases in a parabolic manner with increasing chip length. (2) No significant variation in the rate of pulping was noted for digestions with chips of different lengths. (3) The optimum strength values were reached in pulps from chips ¼ to ½ inch long; the gain in strength in pulp from chips greater than ½ inch long was generally small. (4) Disregarding the ray cells, the fiber distribution data showed a gradual decrease in shorter fibers and a corresponding increase in longer fibers in pulps from chips of increasing lengths up to ½ inch; pulps from chips over ½ inch long have a more or less even distribution of fibers of different lengths. This trend is similar to that for the pulp strength-chip length relation. (5) Various fiber length averages and medians increased in value with the chip length and indicated the reduction in fiber length by chipping. Assuming that no reduction in fiber length occurs during pulping, the maximum fiber length (cut plus uncut fiber length from the pulp from ¾-inch chips) was 1.0 mm. less than the average uncut fiber length of 3.5 mm., or a minimum reduction of 28 per cent for the chipping operation. The maximum reduction which occurred in the ⅛-inch chips was 67 per cent. Except for the ⅛-inch and ¼-inch chips the fiber length appeared to have no direct bearing on the pulp strength.

Four main factors govern the selection of the optimum length of chips for sulphite pulping. The time required for penetration of the chips by the cooking liquor is one important consideration; obviously, the longer the chip the longer the time of penetration. With woods difficult to penetrate, a short chip would be of considerable advantage. A second factor is the effect of chip length on the strength characteristics of the pulp; apparently the cutting of more or less fibers, up to a certain point, at least, should affect the various strength characteristics. A third factor is the effect of the chip size on digester operation; experience has shown, for example, that a large amount of fine material hinders circulation. Finally, the effect of chip length on the economical operation of the chipper and screen is a factor to be considered in chip size selection.

Although certain practical experience is known and made use of by mill operators, there is little published information dealing directly with the effect of chip length in sulphite pulping. Sutermeister *(1)* recommends the following chip sizes for various purposes:

Hemlock	½ to ¾ inch long
Spruce for mitscherlich, unbleachable	1¼ to 1¾ inches long
Spruce for quick-cook, news print stock	¾ to 1 inch long
Spruce for easy-bleaching	⅝ to ¾ inch long

In their soda pulp investigations, *(2)* Cable, McKee, and Simmons find no appreciable effect of chip length on yield, bleach, and loss on bleaching for chips varying between ½ and 1⅓ inches long. They also report no difference in cooking time with variation in chip length.

The purpose of the present report is to present data on the effect of chip length on the time of penetration and pulping of western hemlock heartwood. The chips used ranged in length (in direction of grain) from ⅛ inch to 1⅛ inches. They were subjected to penetration tests and pulped with a normal sulphite cooking acid; the yield determination, pulp quality delineation, and fiber measurements were carried out according to standard methods.

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[2] Member TAPPI, assoc. engineer, U. S. Forest Products Laboratory, Madison, Wis.

Apparatus and Materials

Various lengths of chips (⅛-inch, ¼-inch, ½-inch, ¾-inch, and 1⅛-inch measured along the grain) were prepared from 3- by 3-inch stocks of western hemlock heartwood by use of a chipper having a disc diameter of 24 inches and equipped with two knives; the setting of the knives governed the chip lengths. Fines were removed by screening the chips on a suitably sized screen, the chips being hand sorted for size. The tolerances allowed were ±1/32 inch for the ⅛ inch chip, and ±1/16 inch for the ¼, ½, ¾ and 1⅛ inch chips.

The penetration experiments were carried out in corrosion resistance bombs which were immersed in an electrically heated and controlled oil bath.

The digestions were made in a 1½ cubic foot capacity steam jacketed autoclave, which was fabricated from stainless-clad material. The charge was 12 pounds of oven-dry chips per digestion.

The fiber measurements were made with a microprojector and a suitably graduated celluloid scale.

The description of the pulp testing apparatus has been previously published *(3)*.

The western hemlock (Tsuga heterophylla) heartwood was obtained from logs from Clear Lake, Wash. Comparisons of the wood used in these experiments were made with data obtained from white spruce (Table I). The heartwood of the logs was somewhat higher in lignin and lower in cellulose and pentosan content than that of the white spruce. The average weight per cubic foot of the western hemlock logs was slightly higher than for the white spruce. The color of the western hemlock heartwood was only slightly inferior to the white spruce heart and sapwood color.

The acid used for digesting the chips was prepared by passing sulphur dioxide from a cylinder into a calcium hydrate suspension, the final composition being 5.50 per cent total sulphur dioxide and 1.25 per cent combined sulphur dioxide. The analysis of the fresh and blown liquor was carried out as described in previous work. *(4)*

Procedure

Time of Penetration

Penetration was considered complete when calcium bisulphite showed its presence throughout the chips, the minimum time required for its penetration was considered as the time of penetration. After the penetration treat-

TABLE I
COMPARISON OF HARDWOOD OF WESTERN HEMLOCK AND WHITE SPRUCE

	Western hemlock	White spruce
Average weight per cubic foot. (Weight when oven-dry and volume when green)	26.9*	25.5
Lignin, per cent	31.8	28.0
Cellulose, per cent	57.8	60.3
Total pentosans, per cent	8.3	12.8
Hess-Ives color readings, Red	68	66
Green	50	52
Blue	40	41

* Based on total log, that is, heartwood plus sapwood.

ment with acid containing 5.50 per cent total sulphur dioxide and 1.25 per cent combined sulphur dioxide at 110 deg. C., the presence of the bisulphite was indicated by placing 1 per cent bromphenol blue solution on the surface produced by cutting the chip in the middle in the grain direction; after evaporation of the excess sulphur dioxide a blue color was taken as an indication of the presence of calcium bisulphite and the extent of its penetration. In the case of incomplete penetration, the bromphenol blue showed a yellow color.

The calculated or theoretical times of penetration were derived from Hawley's equation *(5)* for flow through wood cells. This equation is developed from the consideration that "if it takes one unit of time to fill the first set of cavities through one set of orifices, it will take two units of time to fill the second set of cavities, since for the second filling the liquid must flow through two similar sets of orifices in series; the third set of cavities will require three units of time, and so on. If then, y is the depth of penetration, b the dimension of the cell cavity in the direction of flow, x the time required to penetrate depth y, and a the time required to fill the first cell, when $\frac{y}{b} = 1, \frac{x}{a} = 1$; when $\frac{y}{b} = 2, \frac{x}{a} = 3$; when $\frac{y}{b} = 3, \frac{x}{a} = 6$; and so on. The relation between x/b and x/a is therefore given by the equation

$$\frac{x}{a} = \frac{y}{b}\left(\frac{\frac{y}{b} + 1}{2}\right) \qquad (1)$$

a can be calculated from this equation by using one experimentally determined value for x and y and the uncut fiber length can be determined by fiber measurements.

The sample calculation below illustrates a typical application.

From equation (1)

$$x = ay\left(\frac{y + b}{2b^2}\right). \qquad (2)$$

From fiber measurement data, b = length of cell cavity in direction of flow = 3.5 mm. From experimental penetration data, y = 9.5 mm. (equivalent to ¾-inch chip), x = 2.25 hours.

$$\text{Then } a = \frac{x}{y\left(\frac{y + b}{2b^2}\right)} = \frac{2.25}{9.5\left(\frac{9.5 + 3.5}{2 \times 3.5^2}\right)} = 0.446 \text{ hours}$$

Thus for a ½-inch chip, y = 6.35 mm. and

$$x = 0.446 \times 6.35\left(\frac{6.35 + 3.5}{2 \times 3.5^2}\right) = 1.14 \text{ hours.}$$

It should be realized that the above equation is developed for an integral number of cells and because of variations in wood structure is more applicable to a large number of cells. It will, therefore, be somewhat modified when the chip length is composed of a small number of full cells and a relatively large proportion of fractions of cells.

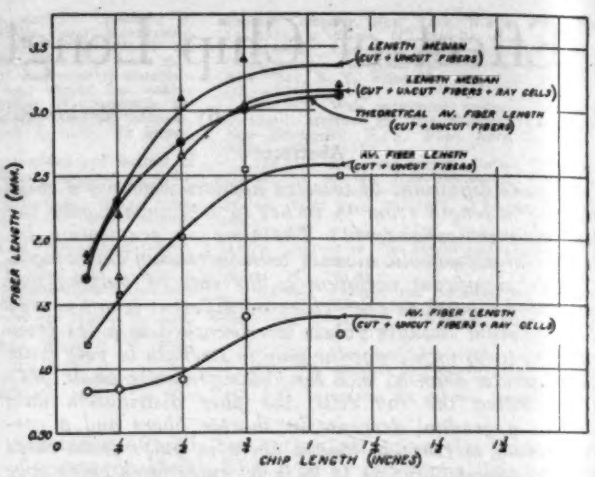

FIG. 1.
Average fiber lengths and length medians of pulps from western hemlock heartwood chips of various lengths.

DIGESTION

The equivalent of twelve pounds of the prepared oven-dry chips were charged into the autoclave. Except for the first three digestions in which the moisture content was about 15 per cent the chips were air-dried to between 8 and 6 per cent moisture content before digestion. After charging the wood, 8.5 gallons of acid were run into the autoclave and all chips submerged in the acid before fastening the cover in place. Steam was admitted into the autoclave jacket through a reducing valve at such a rate as to produce a uniform rise to 110 deg. C. in four hours and the rate then increased so as to produce a uniform rise to 145 degrees in six hours more. The temperature was held at 145 deg. C. until the liquor tests showed the necessity of blowing.

Fifteen minutes were allowed for reducing the pressure of 75 pounds per square inch, which was maintained during the digestion, to atmospheric pressure. The autoclave cover was then removed and the pulp emptied into a screen

TABLE II.—DIGESTION CONDITIONS AND RESULTS, PULP CHARACTERISTICS, AND FIBER MEASUREMENTS OF PULPS FROM WESTERN HEMLOCK HEARTWOOD CHIPS OF DIFFERENT LENGTHS

Chip length, Inches	Time of digestion, Hours	Yield of pulp: Total, Per cent	Yield of pulp: Screened, Per cent	Yield of pulp: Screenings, Per cent	Bleach used, Per cent	Condition of pulp	Color of pulp: Red, Ives parts	Color of pulp: Green, Ives parts	Color of pulp: Blue, Ives parts	Pebble mill strength tests: Bursting strength, Initial, Pts./lb./ream	Bursting strength, Maximum, Pts./lb./ream	Folding strength, Initial, Double folds	Folding strength, Maximum, Double folds	Tearing strength, Initial, Gms./lb./ream	Tearing strength, Maximum, Gms./lb./ream	Tensile strength, Initial, Meters	Tensile strength, Maximum, Meters	Solid fraction: Initial	Solid fraction: Maximum	Fiber measurements: Uncut fibers, Per cent	Fiber measurements: Ray cells, Per cent	Fiber measurements: Average length of cut and uncut—ray cells, Mm.	Fiber measurements: Length median of cut and uncut—ray cells, Mm.	Fiber measurements: Average length of cut—uncut, Mm.	Fiber measurements: Length median of cut—uncut, Mm.
¾	11.75	47.7	47.7	..	0	Unbleached	70	59	57	0.24	0.78	3	226	1.23	1.32	2765	6360	0.32	0.54	12.3	37.1	0.82	1.83	1.18	1.89
					13	Bleached	90	86	83																
¼	11.75	49.8	49.8	..	0	Unbleached	67	57	53	.26	1.14	6	1363	1.98	2.35	2578	7367	.26	.51	22.0	42.2	.84	1.72	1.57	2.18
					18	Bleached	91	85	84																
¾	11.75	49.5	49.4	0.1	0	Unbleached	71	60	58	.35	1.15	16	2291	2.68	3.11	2681	7415	.29	.47	34.1	47.9	.92	2.66	2.02	3.10
					12	Bleached	85	84	83																
¾	11.50	47.9	47.3	.6	0	Unbleached	..	..	..	.25	1.09	10	2272	2.71	3.61	2096	6287	.24	.46	45.5	44.0	1.40	3.05	2.55	3.41
					15	Bleached	15	88	83																
1¼	11.75	47.7	47.4	.3	0	Unbleached	65	56	53	.22	1.14	5	2240	1.90	2.61	1990	6145	.28	.45	59.0	44.8	1.26	3.14	2.50	3.20
					15	Bleached	88	87	82																

TABLE III

TYPICAL LENGTH MEDIAN CALCULATION

Fiber division, Mm.	Number of cut and uncut fibers	Total length (Multiplied by 6)[b], Mm.	Cumulative total, Mm.
0 to 1/32	47	47	47
1/32 to 2/32	38	114	161
2/32 to 1	20	100	261
1 to 1 1/32	18	126	387
1 1/32 to 1 2/32	18	162	549
1 2/32 to 2	14	154	703
2 to 2 1/32	13	169	872
2 1/32 to 2 2/32	15	225	1097
2 2/32 to 3	5	85	1182
3 to 3 1/32	6	114	1296
3 1/32 to 3 2/32	2	42	1338
3 2/32 to 4	3	69	1407
4 to 4 1/32	...	...	.....
4 1/32 to 4 2/32	1	27	1434[a]

[a] From figure 2 at $\frac{1434}{2} = 717$, the midpoint, the length median = 1.85 mm.

[b] Length multiplied by 6 in order to work with whole numbers.

box. The pulp, after thorough washing, was screened through a 0.12-inch cut screen plate; it was then pressed to 60 per cent moisture in an hydraulic press, broken up and its weight and moisture determined for the yield figure.

In addition to the digestions made with the chips of different lengths which had been prepared in the chipper, one digestion was made with specially prepared chips. These chips measured ¾ inch along the grain and resembled the ordinary ¾-inch chips in shape, but were prepared by sawing and planing so as to minimize the splitting and shearing action of the chipper knives. Thus these specially prepared chips had smooth plane surfaces as contrasted with the jagged surfaces and edges of ordinary chips.

Pulp Tests

The usual bursting, double folds, tearing, and tensile strength tests were made according to the methods standard at the Forest Products Laboratory *(3)*. Yield of pulp and bleach requirement were determined by methods also standard.

Fiber Measurement *(6)*

Fiber lengths of uncut fibers, cut fibers, and ray cells were measured at 50 and 130 diameters by means of a microprojector. Approximately two hundred fiber measurements were made for each determination, the ray cells accompanying this number of fibers being measured in addition. Various average fiber lengths and length medians were calculated and are reported in Table II and Fig. 1. The arithmetical averages include: the uncut fiber measurements; the uncut fiber plus cut fiber measurements; the uncut plus cut fibers plus ray cell measurements; and the ray cell measurements. A length median in which the effect of very short and very long fibers is minimized included the uncut plus cut fiber measurements and the uncut plus cut fibers plus ray cell measurements. This median was obtained by plotting the cumulative total fiber lengths for each fiber division measured against the average fiber division length. The midpoint of the total accumulation on the curve shown in Fig. 2 furnished the median, as illustrated by the sample calculation in Table III and Fig. 2.

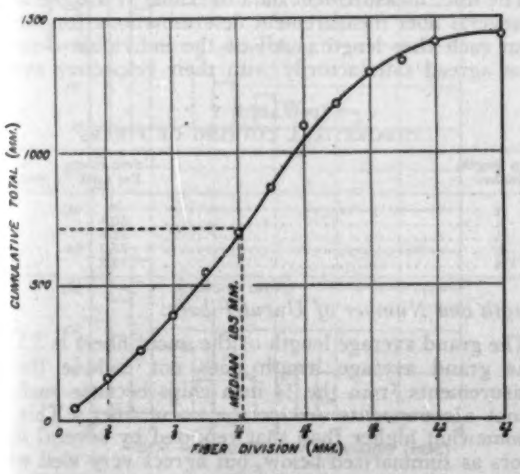

FIG. 2.
Length median determination.

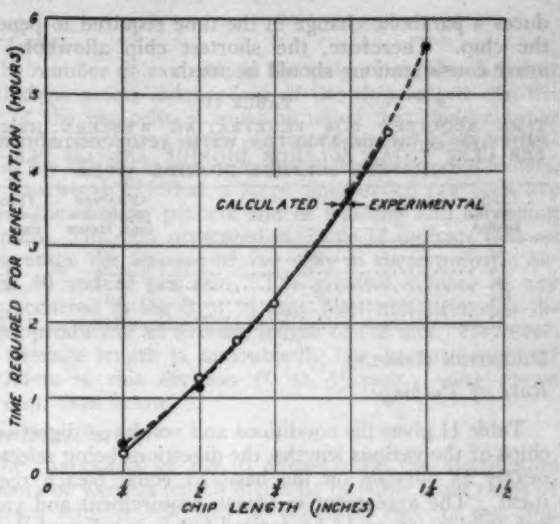

FIG. 3.
Time required for penetrating western hemlock heartwood chips of various lengths.

Discussion

Penetration Experiments

The result of the penetration experiments as shown in Table IV and Fig. 3 are well in accord with experience. The close agreement of the experimental curve with the curve calculated from Hawley's equation *(5)* does not necessarily indicate that the penetration proceeds in a fashion analagous to that assumed in setting up the equation. Hawley *(5)* states "The flow of the liquid during impregnation can be considered as a series of discontinuous flows, the conditions remaining constant while one set of cell cavities is being filled and the resistance increasing stepwise by a practically constant amount as each set of cell cavities is filled and the liquid begins to flow through the next set of orifices." It should be emphasized that because of the variability of the wood and the chips the present data cannot be considered absolutely accurate and differences of 15 to 30 minutes may easily occur, particularly with the longer chips. The close agreement of the experimental data with the calculated data may be merely a coincidence and may not apply to other conditions. The accordance does indicate, however, that the time of penetration and chip length may be related, for the chip lengths studied, in a parabolic manner; this relationship can be expressed by $x = my + ny^2$ where m and n are factors which are functions of the cell length, and x, as before, is the time required to penetrate depth y. Thus from a penetration standpoint a change in chip length pro-

duces a parabolic change in the time required to penetrate the chip. Therefore, the shortest chip allowable from other considerations should be used.

TABLE IV

TIME REQUIRED FOR PENETRATING WESTERN HEMLOCK CHIPS OF VARIOUS LENGTHS WITH ACID CONTAINING 5.50 PER CENT TOTAL SULPHUR DIOXIDE AND 1.25 PER CENT COMBINED SULPHUR DIOXIDE AT 110° C.

Chip length, Inches	Observed penetration time, Hours	Theoretical penetration time, Hours
⅛	.25	.38
¼	1.25	1.14
⅜	2.25	2.25
½	4.5	...
¾	...	5.62

Digestion Results

Rate of Pulping:

Table II gives the conditions and results of digestions of chips of the various lengths, the digestions being selected as nearly as possible on the basis of equal bleach requirement. The agreement in bleach requirement and yield is not so close as could be desired but it is believed that the discrepancies are not sufficient to alter the indications to any great extent. Considering either the yield or bleach requirement for a given pulping time as an indication of rate of pulping, any decrease in the rate of pulping with an increase in chip length was very slight.

Strength:

Table II and Fig. 4 depict the initial and maximum developed strength characteristics for the selected pulps from the different-sized chips. The solid fraction of the pulp sheets is also included in Table II. A variation in the folding and tearing strengths may be noted in pulps from chips less than ½ inch long and in the bursting strength in pulps from chips less than ¼ inch long.

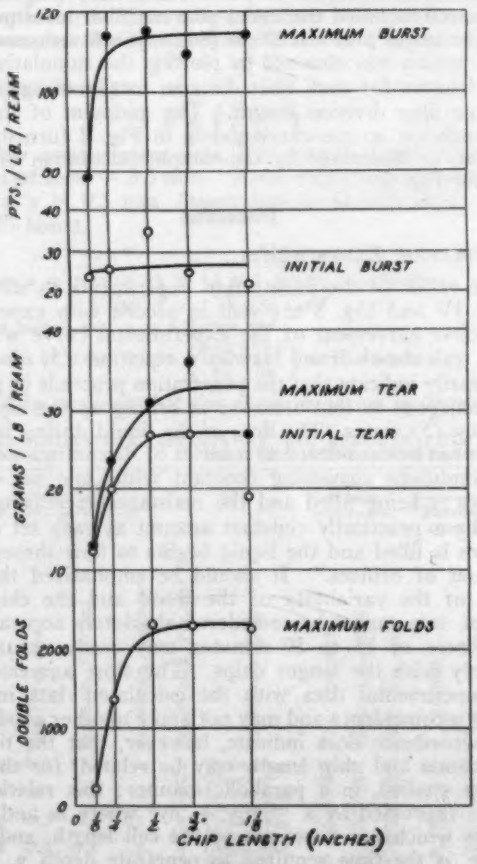

FIG. 4.

Strengths of pulps from western hemlock heartwood chips of various lengths.

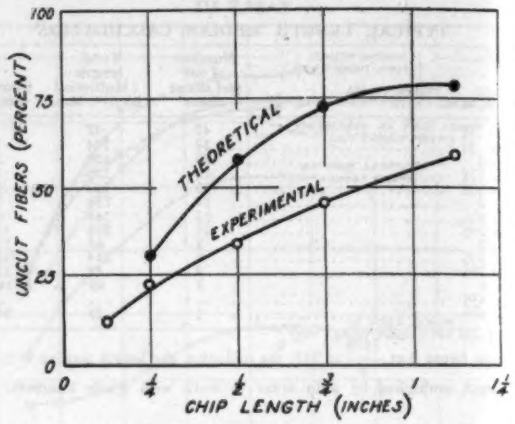

FIG. 5.

Percentage of uncut fibers in pulps from western hemlock heartwood chips of various lengths.

The tearing strength obtained from the 1-⅜-inch chips is out of line with the other data but it is not felt that this is indicative of any definite trend. The solid fraction of the test sheets decreases as the fiber length increases, which alone would tend to decrease the strengths, particularly the tensile strength. Any increase in the strength of pulps from chips longer than ½ inch or perhaps even ⅜ inch would appear to be very slight for the range of conditions studied. However, it is possible that this minimum length of chip may be different for different qualities of pulp.

Fiber Measurements:

The data on fiber measurements are summarized in Tables II and V and Fig. 1 and 5. Lampén*(7)* and Bergman and Backman*(8)* have found that the fibers in the chip and the fibers in the pulp are practically the same, that is, the pulping action has little or no effect on the fiber length. Observations in the present study confirm these conclusions, so that it is assumed that the lengths of fibers in the chips and pulps are identical.

The fiber measurement data of Table II are the average of several fiber measurement determinations for the pulps from each chip length. All of the individual determinations agreed satisfactorily with their respective averages.

TABLE V

THEORETICAL CUTTING OF FIBERS

Chip length, Inches	Uncut fibers Per cent	Average length, Mm.
⅛	0	1.70
⅛	30.6	2.29
⅜	57.8	2.76
½	72.7	3.02
⅝	78.8	3.13

Length and Number of Uncut Fibers:

The grand average length of the uncut fibers is 3.55 mm. This grand average length does not include the fiber measurements from the ⅛-inch chips because such chips cannot accommodate an average uncut fiber. This value is somewhat higher than that reported by several investigators as summarized below, but agrees very well with an average obtained in another study at the Forest Products Laboratory.

TRACHEID LENGTH OF WESTERN HEMLOCK

Record (9)	3.1 mm.
Mell (10)	3.0 mm.
Vol. 3, Manufacture of Pulp and Paper (11)	2.8 mm.
Forest Products Laboratory—unpublished data (13)	3.4 mm.
This study	3.5 mm.

A graphical relation between chip length and percentage of uncut fibers (Fig. 5), connects these two variables almost linearly. The pulps from the longer chips have a greater number of uncut fibers. This approximate linear relation holds only in the range studied here, because as the chip length is increased the percentage of uncut fibers approaches 100 per cent asymtotically. A theoretical relation between percentage of uncut fibers and chip length is also illustrated in Fig. 5. The data for this curve, summarized in Table 5, are based on the assumptions that wood is composed of fibers of equal length (3.5 mm. in this case as established by the fiber measurement data) placed end to end and that the fibers are cut sharply by the chipper knives. The first assumption ignores the fiber distribution in wood, while the second is obviously false; in fact Bergman and Backman *(8)* consider the chipping process as the main factor in the decrease in fiber length from the wood to the pulp.

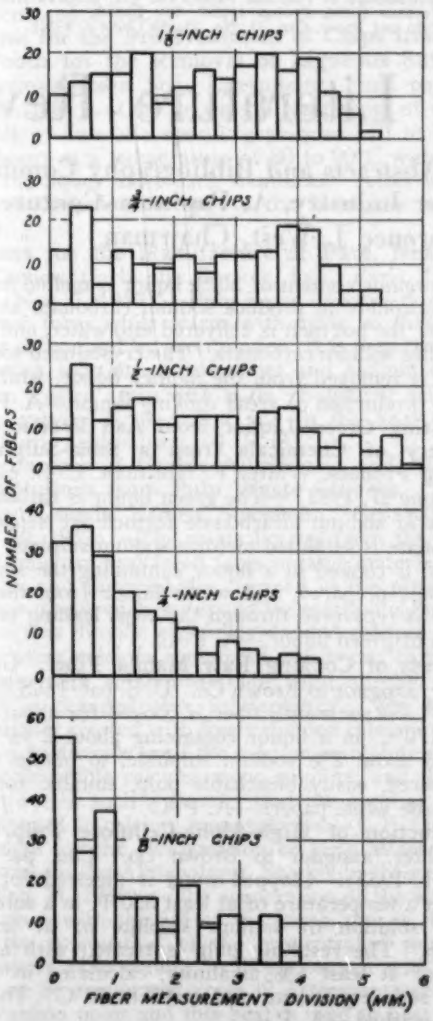

FIG. 6.
Fiber distribution in pulps from western hemlock heartwood chips of various lengths.

Ray Cells:

The number of ray cells in the pulps from the different sized chips seems independent of the chip length. In the case of the ray cells, it must be noted that their number is considerably lower in the pulp as compared to their number in the chips. It has been shown by Ritter, Simmonds, and Eastwood*(13)* that a large number of ray cells are lost in the cooking process and in washing and screening the pulp. The data presented in Table II indicate that on the average the amount of ray cells in these pulps is between 40 and 45 per cent. The greatest number of ray cells occurred in the 0 to ⅓ mm. fiber measurements division, producing an average length of 0.2 mm. However, this average length is undoubtedly low because more of the fibers in this division (0 to ⅓ mm.) were above 1/6 mm. than below.

Fiber Distribution:

The bar charts in Fig. 6 demonstrate the distribution of fibers of various length divisions in pulps from chips of different lengths. It will be observed that as the chip length increases the number of fibers in the lower measurement divisions decreases and that this loss is shown as a gain in the higher divisions. It will also be noted that the distributions tend to flatten out with increasing chip lengths, that is, the number of fibers in each division are more nearly equal for the longer chips as compared to the preponderance of fibers falling in the lower measurement divisions for the shorter chips. This evening-up of the fiber number distribution follows in general the strength-chip length relation brought out previously, namely, that little change was shown in pulp from chips above ½-inch long.

Average Fiber Lengths and Length Medians:

The data in Table II and the curves of Fig. 1 disclose the trends in the change of fiber length with chip length. The translation in the direction of increased fiber length of the average fiber length and the length median when ray cells are not included in the calculation, and a similar translation when the effect of the shorter and longer fibers is minimized by applying the length median idea, will be noticed. The maximum fiber length in the four cases is reached approximately in pulps from chips ¾-inch long. This attainment of maximum fiber length does not coincide with the attainment of maximum pulp strength. The ¼- to ½-inch chips were sufficiently long to produce the highest strengths and this lack of correspondence eliminates the dependence of strength on fiber length for chips longer than ½ inch, while tending to emphasize the importance of the effect of fiber distribution on strength, as remarked on in the discussion of fiber distribution. An interesting comparison between the average fiber length (cut plus uncut fibers) of the theoretical chip obtained as described previously and the experimentally determined average fiber length is also evident in Fig. 1. While the theoretical curve is considerably higher; its general shape is the same as the experimental curve. The reduction in fiber length during the chipping process, assuming no reduction during pulping, is shown best by the differences in average fiber length of the uncut plus cut fibers from the various pulps, neglecting the ray cells since they are probably a little affected by chipping and the uncut fiber length of 3.5 mm. The maximum difference, of course, occurred in the pulp from the ⅛-inch chips corresponding to a 67 per cent reduction. The minimum difference of 1.0 mm. or 28 per cent was found for the pulp from the ¾-inch chips.

Specially Prepared Chips:

The pulp prepared from "ideal" ¾-inch chips was very

"hard" in comparison with the pulps made from ¾-inch chips produced by regular chipping procedure. Differences in fiber measurement between these two types of chips are shown in Table VI.

Although discrepancies are evident in the length median and average fiber length, there is no indication of any appreciable change in fiber length caused by the different methods of preparation of the chips.

TABLE VI

COMPARISON OF FIBER MEASUREMENTS OF PULPS FROM SPECIAL AND ORDINARY ¾-INCH CHIPS

	Pulp from ordinary ¾-inch chips	Pulp from special ¾-inch chips
Average fiber length (cut + uncut + ray cells), mm.	1.40	1.41
Length median (cut + uncut + ray cells), mm...	3.05	3.65
Average fiber length (cut + uncut fibers), mm...	2.55	2.06
Length median (cut + uncut fibers), mm.....	3.41	3.77
Ray cells, per cent.....	44.00	35.10
Uncut fibers, per cent.....	45.50	43.90

Blown and Dumped Pulps:

In order to determine whether there were any differences in the fiber lengths of pulps blown and dumped from a digester, fiber measurements were made on a pulp from a sulphite digestion of western hemlock which was partially dumped and partially blown. The strength tests showed only the ordinary variations and the data in Table VII show no significant difference in the fiber measurements.

TABLE VII

COMPARISON OF FIBER LENGTHS OF BLOWN AND DUMPED PULPS

	Blown	Dumped after blowing down pressure
Average fiber length (cut + uncut + ray cells), mm.	1.32	1.22
Length median (cut + uncut + ray cells), mm...	2.63	2.45
Average fiber length (cut + uncut fibers), mm...	1.88	1.87
Length median (cut + uncut fibers), mm.....	2.75	2.55
Ray cells, per cent.....	33.00	39.00
Uncut fibers, per cent.....	31.00	33.00

Literature Cited

(1) Sutermeister, E., Chemistry of Pulp and Paper Making, p. 185, John Wiley & Sons, New York (1929).
(2) Paper Trade J. 83, No. 14:115 (Sept. 30, 1926).
(3) F.P.L. Manual of Standard Testing Methods for Pulpwood, Pulp, Stuff and Paper. (Mimeograph report), Forest Products Laboratory, Madison, Wis.
(4) Paper Trade J. 74, No. 15:295-305 (Apr. 13, 1922).
(5) Wood-Liquid Relations, Tech. Bul. 248, U. S. Dept. Agr.
(6) Acknowledgment is made to Gertrude J. Griffin, Forest Products Laboratory, Madison, Wis., for making many of the fiber measurements.
(7) Zellstoff u. Papier, 11:521-524 (Sept. 1931).
(8) Papier-Fabr., 27:499-456 (1929).
(9) Identification of the Economic Woods of U. S. John Wiley and Sons, New York, (1919).
(10) Paper Trade J. 52, No. 24, (June 15, 1911).
(11) Manufacture of Pulp and Paper, Vol. III, McGraw-Hill, New York.
(12) Problem C-816, Project 1168-7, Tile Report.
(13) Pulp and Paper, Can. 31, No. 23:689 (June 4, 1931).

Pulp and Paper Industry Literature Review

Abstracts of Articles and Patents Compiled by the Abstracts and Bibliography Committee of the Technical Association of the Pulp and Paper Industry, A. Papineau-Couture, John F. Ohlson, C. E. Peterson and Clarence J. West, Chairman

Copies of United States Patents can be obtained from the United States Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.

Alkaline Processes

Production of Alpha-Cellulose. Antonio B. Bori and Jose M. Estape. U. S. pat. 1,920,239 (Aug. 1, 1933).—Material of canes such as *Arundo donax, Gynerium saccharoides, Gynerium sagittatum,* Malacca cane, otate, feather grass, henequen and ramie, is digested in an aqueous solution comprising an alkaline hydroxide such as caustic potash together with sodium sulphide and ammonia. Various auxiliary treatments and modifications are described.—A. P.-C.

Wood Pulping Process. Philippe J. Plancquaert. Fr. pat. 42,127 (May 31, 1933); addition to 733,330.—Wood is boiled with a dilute solution of sodium carbonate and is then put into a solution of sodium or potassium hypochlorite, and carbon dioxide is passed in under pressure so that free hypochlorous acid is formed. The material is then boiled in sodium carbonate solution to separate the cellulose.—A. P.-C.

Pulping Process. Linn Bradley and Edward P. McKeefe, assignors to The Bradley-McKeefe Corp. Can. pat. 333,202 (June 13, 1933).—Resinous wood chips are impregnated with a liquor containing essentially sodium sulphite in amount sufficient to produce chemical pulp and to maintain the liquor alkaline to litmus during cooking. The temperature is gradually raised and the chips are cooked at a temperature corresponding to the saturated steam pressure of about 145 to 160 lbs. per sq. in. —A. P.-C.

Treating Black Liquor. George A. Richter, assignor to The Brown Co. Can. pat. 334,466 (Aug. 1, 1933).—The inorganic content of black liquor is melted in a reducing atmosphere to produce sodium carbonate and sodium sulphide, the hot melt is delivered into water, and cooled to crystallize sodium carbonate. The crystallized sodium carbonate is removed from the mother liquor, which is used for the production of fresh cooking liquor.—A. P.-C.

Treating Green Liquor from Ash Produced in the Recovery of Chemicals from a Soda-Sulphur Base Pulping Process. Walter F. Hoffman. U. S. pat. 1,915,315 (June 27, 1933).—The green liquor is carbonated, the crystals of sodium bicarbonate formed are separated, the bicarbonate is sulphited to form sodium sulphite, cellulosic material is cooked in a liquor containing the sodium sulphite thus prepared, and waste liquor from the cooking process is recovered through the steps leading to the production of green liquor.—A. P.-C.

Process of Cooking Raw Manila Fiber. George A. Richter, assignor to Brown Co. U. S. pat. 1,921,539 (Aug. 8, 1933).—Raw manila fiber is cooked for about 4 hrs. at about 170°C. in a liquor containing about 2 to 3% soda ash and about 2% sodium sulphide, to obtain a strong, long-fibered, easily bleachable pulp, suitable for making high grade white papers.—A. P.-C.

Production of High-Alpha-Cellulose Pulp. George A. Richter, assignor to Brown Co. Can. pat. 334,468 (Aug. 1, 1933).—Chipped wood is digested for about 4 hours at a temperature of at least 350°F. in a substantially neutral solution of sodium sulphite of at least 10% strength. The resulting pulp is treated with a refining liquor of at least 5% alkalinity, calculated in terms of caustic soda equivalent, and at 0° to 50°C. The refined pulp is washed.—A. P.-C.

Alkaline Pulping Process. James H. Ross, Jr. U. S. pat. 1,922,262 (Aug. 15, 1933).—For maintaining optimum

conditions in processes such as the digestion of wood chips with soda, a portion at least of the digestion liquor is withdrawn, mixed with an active agent of suitable predetermined concentration and returned to the digestion process. —A. P.-C.

Observations Relative to the Physical and Chemical Changes Taking Place in the Cooking of New White Rags. Edwin R. Laughlin. Paper Trade J. 97, No. 17: 39-52 (Oct. 26, 1933).—A study of the effects of cooking with caustic soda and with lime under mild and drastic conditions.—A. P.-C.

Paper Pulp from Colored Rags. Samuel Lenher and Harry F. Lewis, assignors to E. I. Du Pont de Nemours and Co. U. S. pat. 1,929,145 (Oct. 3, 1933).—The rags are treated with a hot solution of caustic alkali, the alkaline liquor is removed from the treated rags, the rags are then washed with water, treated with an alkaline hydrosulphite compound, separated from the latter, and again washed.—A. P.-C.

Decomposition with Chlorine. Zellstoff Papier 13, No. 10 (Oct., 1933).—The results of various experiments are given. Complete decomposition without the separation of the chlorinated lignin is impossible. Pre-treatment with sulphate liquor diminishes the yield. Aspen, willow and poplar are easy to decompose, while birch, beech and pine are difficult.—J. F. O.

Process for the Pre-Treatment of Chips from Resinous Woods for the Removal of Ligneous Substances. La Cellulose Rosen Soc., Luxemburg. Finn. pat. 14,943 (July 29, 1931).—One or several treatments of the chips with milk of lime of a specific gravity of 1.01 to 1.015 for 4 to 5 hours at a temperature of 80 to 90°C with a drainage of the liquor after each treatment. After which the chips are cooked according to the bisulphite method.—J. F. O.

Process for the Manufacture of Pure, Nearly Ash-Free Carbon. Carbonfix Societe, Ltd., Paris. Finn. pa.t 15,059 (Nov. 7, 1930).—Pulp waste liquors are treated in the liquid form while warm with acids so that the raw lignin is carbonized by precipitation. It is then treated with an aqueous solution of potassium and sodium carbonate and then treated again with acids. Sulphuric acid of 1.82 specific gravity is used first and in the final treatment hydrochloric acid is used.—J. F. O.

Manufacture of Usable Alkalimono and Alkalibisulphite Solutions from Pulp Waste Liquors. Patentaktiebolaget Grondal Ramen, Stockholm. Ger. pat. 583,850 (April 30, 1932).—The waste liquors from the manufacture of pulp are first freed from organic materials and the sulphides and thiosulphides, formed in the process. The residue is dissolved in water and the solution is then treated with sulphur dioxide and finely divided calcium carbonate or any other calcium compound which can form calcium bisulphite with sulphur dioxide, until all the alkali salt present is changed over to bisulphite. The solution is then further treated with finely divided calcium carbonate, oxide or hydroxide until the calcium bisulphite is changed over to insoluble calcium mono-sulphite, and this is also carried out in such a manner that the gypsum present is also changed to calcium monosulphite.—J. F. O.

Process for the Evaporation of Pulp Waste Liquors. Industriekemiska Aktiebolaget, Stockholm. Ger. pat. 579,-524 (Feb. 21, 1931).—The evaporation of the waste liquor takes place with the aid of the gases, that is the vapors, from the combustion of the concentrated waste liquor. The vapors after coming in direct contact with the waste liquor to be evaporated cools to a temperature below its condensation point and this heat is used to heat the waste liquor indirectly which with the aid of air or other gases is pre-concentrated. According to claim number two, the air vapor mixture from the pre-thickening with the aid of air is used as the combustion air for the combustion of the waste liquor.—J. F. O.

Process for the Evaporation of Liquids. Metallgesellschaft Akt. Ges., Frankfurt a.M. Ger. pat. 580,928 (Dec. 24, 1929).—Conditions are given for the evaporation of solutions which contain substances whose solubility decreases with the increase of temperature and thus preventing the heating surface from being covered by incrustants. —J. F. O.

Process and Apparatus for the Preparation of Rosin Soap. Cyprien Gillet, Bordeaux, France. Finn. pat. 15,170 (May 4, 1931).—A mixture of 100 parts alkali carbonate to 40 to 60 parts alkali bicarbonate, and ammonia serves as the means for saponifying the rosin. The saponification takes place in two stages, the first with the carbonate bicarbonate mixture in such a quantity that only a part of the rosin is saponified, the ammonia being used in the last stage in a quantity sufficient to saponify the remaining rosin.—J. F. O.

Process for the Evaporation of Water or Other Liquids. Industrikemiska A. Bol, Stockholm. Nor. pat. 52,570 (May 16, 1929).—The process works on the multiple effect evaporation principle with nearly the same pressure throughout the entire apparatus and a mixture of air or other non-condensable gas or mixture of gases with condensing steam is used as the heating means. The operation is carried out so that the air or other non-condensable gas is led over the surface of the liquid.—J. F. O.

Arrangement for Rotating Ovens and Disc Evaporators. Leif Glorersen, Pitkaranta. Finn. pat. 15,110 (Dec. 3, 1931).—The invention consists of arrangement for the utilization of the heat in the gases from the soda oven and the disc evaporators.—J. F. O.

Process and Arrangement for the Thickening of Liquids. Industrikemiska. A. Bol, Stockholm. Finn. pat. 14,909 (May 18, 1929).—The gas steam mixture obtained in the thickening is used as the heat giving medium. —J. F. O.

Process and Apparatus for the Evaporation of Pulp Waste Liquors. Industrikemiska. A. Bol, Stockholm. Finn. pat. 15,016 (Feb. 20, 1931).—The heat of the stack gases is so used that the gas becomes saturated with water vapor whose heat of condensation is used by indirect heat transfer for the warming of the waste liquors.—J. F. O.

Miscellaneous Digesting Methods

Process for the Decomposition of Fibrous Plant Materials. Otto Engel, Eberstadt. Ger. pat. 581,806 (Feb. 4, 1932).—It was found that plant materials can be decomposed in a satisfactory manner with the recovery of cellulose and incrusting materials if the plant material is first treated with dioxan. This solvent is a cyclic di-ether, and contains no chemical reactive group. Nevertheless by simply heating the wood for several hours with dioxan at temperatures of about 90°C. practically all the lignin goes into solution, that is, it is brought into colloidal solution. For example, spruce chips are treated with eight times its weight of dioxan for 5 to 10 hours at 80 to 90°C and with a small addition of hydrochloric acid. The undissolved cellulose can be easily washed with water, because of the miscibility of dioxan with water. The yield is about 60 per cent pulp.—J. F. O.

Process for the Treatment of Materials Containing Plant Fiber According to the Phenolate Method. O. Strecker, Darmstadt, Germany. Finn. pat. 15,107 (May 26,1930). The cooking liquor contains free phenol and substances containing phenol as well as phenolates.—J. F. O.

Disintegrating Wood Chips. Wm. H. Mason assign-

or to Masonite Corp. U. S. pat. 1,922,313 (Aug. 15, 1933).—The chips are forced into an enclosed body of high-pressure steam and thence continuously discharged into a low-pressure region and separated from steam, the latter being condensed. An apparatus is described. —A. P.-C.

Beating

Serviceability and Processing Effects of Oval Cast Iron and Circular Steel Rods in a Rod Mill. C. E. Hrubesky, P. S. Billington and P. K. Baird. PAPER TRADE J. 97, No. 16: 34-38 (Oct. 19, 1933).—The usual physical tests made on pulps develop more rapidly and attain higher maximum values with a lower power consumption by the use of circular rods than by the use of oval rods.—A. P.-C.

The Appleton Vortex Beater. Anon. Paper Trade J. 97, No. 19: 18 (Nov. 9, 1933).—A brief description, pointing out its merits.—A. P.-C.

The Most Economical Way to Prepare Stock for the Paper Machine. M. C. Osborne. Paper Trade J. 97, No. 19: 19-20 (Nov. 9, 1933).—A brief discussion.—A. P.-C.

Haug Refiner Versus Attrition and Jordan Type Refiners. Anton J. Haug. Paper Trade J. 97, No. 22: 33-34 (Nov. 30, 1933).—A brief description of the new Haug refiner, and discussion of its merits.—A. P.-C.

Hydrating Cellulose Fibers. Judson A. De Cew, assignor to Process Engineers, Inc. U. S. pat. 1,917,505 (July 11, 1933).—In treating pulp by a number of jordans, the pulp is partially dewatered after passing through the first refiner and before the last refiner in order to improve cooling of the stock and economize power.—A. P.-C.

Beater. S. Milne, Edinburgh, Swed. pat. 77,246 (Nov. 4, 1926).—The invention is characterized in the special arrangement of the bearing of the roll and the relation with the lighter bar.—J. F. O.

Beater, in Which the Stock is Thrown by the Roll into an Open Collecting Hood. Helmuth Banning, Duren, Ger. pat. 581,428 (Dec. 21, 1930).—The stock is thrown by the beater roll into the collecting hood placed above the beater proper.—J. F. O.

Bleach Beater. I. G. Farbenindustrie Akt. Ges., Frankfurt, a.M. Ger. pat. 583,395 (July 31, 1931).—In ordinary beaters used for bleaching there is a certain amount of chlorine lost due to the fact that it comes in contact with the air before it is consumed and taken up by the water carrying the plant fibers. To eliminate this, an enclosed side channel is built onto the beater through which a part of the stock is made to flow and it is in this enclosed portion that the bleaching agent is added.—J. F. O.

Bleaching

Correction: In Paper Trade J., 97, No. 19, p. 51 (TAPPI Section 235), (Nov. 9, 1933), abstract of S. D. Wells' U. S. pat. 1,883,193, instead of "The pulp, in aqueous suspension, is subjected to the action of potassium hypochlorite . . ." read "The pulp is subjected to an acid treatment with chlorine water or hypochlorous acid . . ."

Bleaching

Bleaching Wood Pulp. Imakichi Nakashima and Shinziro Oinuma. Cellulose Ind. (Tokyo) 9: 201-213 (933).—In the bleaching temperature range of 15° to 50° C., the consumption of chlorine increases with increasing temperature; the reflection rate increases for the same temperature with increasing amount of bleaching powder, and for the same amount of bleach used, it increases with increasing temperature up to 45° C.; beyond 50° C., a decrease in reflection rate is observed. At 35° to 45° C., the bleaching liquor is half consumed in the first hour and ¼ in the next hour, and for the same temperature the consumption decreases with increasing concentration of the liquor; the reflection rate for the same bleaching time increases with increasing concentration, and in the temperature range of 35° to 45° C., it is higher the higher the temperature. The consumption of chlorine increases with increasing concentration of pulp beyond 2%; this allows shortening the bleaching time.—A. P.-C.

Bleaching Kraft Pulp. Harry P. Bassett. U. S. pat. 1,923,292 (Aug. 8, 1933).—The material is treated with a dilute acid such as a 0.05 to 5 per cent nitric acid, which is rendered active by agitation and heating, and after the acid solution has been removed the material is washed, subjected to a hot alkali purifying treatment, washed with hot water, and then treated with a bleaching agent such as a light chlorine bleach.—A. P.-C.

Bleaching Wood Pulp. George A. Richter assignor to the Brown Co. Can. pat. 334,467 (Aug. 1, 1933).—Alkali-cooked wood pulp is treated with water containing 4 to 8 per cent of chlorine, based on the pulp, until the clorine is substantially exhausted. The chlorinated pulp is digested for from 1 to 4 hours at 40° to 70° C. in an alkaline liquor containing 2 to 4 per cent alkali, calculated as caustic soda equivalent, to remove most of the ligneous reaction products from the pulp while substantially preserving the alpha-cellulose content.—A. P.-C.

Bleaching Paper Pulp. Carl B. Thorne. Brit. pat. 393,106 (June 1, 1933).—The pulp is bleached in two or more stages, in at least one of which the pulp at low consistency (not exceeding 8 per cent) is mixed with a bleaching medium (such as chlorine) and passed continuously through two chambers, the first constituting an absorption zone and having means whereby the time of absorption may be regulated. The chlorine-containing gases from the chambers are passed up a packed tower against a circulating current of white water, whereby the latter is rendered fit for re-use. An apparatus is described.—A. P.-C.

Bleaching Process. J. E. Heiskanen, Jyvaskyla, Finland. Swed. pat. 76,898 (June 5, 1930).—The bleaching takes place in vertical enclosed containers which are kept under pressure during the entire process.—J. F. O.

Process for the Improvement of Pulp. Deutsche Gold and Silber Scheideanstalt, Frankfurt a.M. Finn. pat. 15,015 (Oct. 22, 1930).—A process according to the main patent 14,718 in which the chlorine bleach is subjected to an alkaline pre-treatment at high temperatures.—J. F. O.

Device for the Bleaching of Pulp and Similar Materials at High Densities. Gebr. Bellmer, Niefern. Ger. pat. 585,146 (March 15, 1931).—A concrete container with a separating wall extended vertically and a system whereby compressed air accompanies the introduction of the bleaching means are the features of this patent.—J. F. O.

Pulp-Purification

Keeping Dirt Out of Paper. E. K. Becker, Paper Trade J. 97, No. 23: 39-41 (Dec. 7, 1933).—A brief discussion of the problem of keeping dirt out of paper by screening.—A. P.-C.

System for the Purification of Pulp. Papeteries Navarre Societe Anonyme, Lyons, France. Ger. pat. 579,075 (Sept. 13, 1931).—A special system in which there are several containers and a counter current flow of the wash medium.—J. F. O.

Cellulose Purification. Carleton Henningsen, assignor to Du Pont Rayon Co. U. S. pat. 1,919,329 (July 25, 1933).—A cellulosic material suitable for rayon manufacture and which contains 98 to 99 per cent alpha-cellulose and is capable of forming a solution having a viscosity of 2, is prepared by treating aged alkali cellulose with a caustic alkali solution, washing and alkalizing again.—A. P.-C.

Philadelphia Paper Market Moderately Active

Both Fine and Coarse Paper Divisions Show Evidence of Slight Recessions—Complex Conditions Experienced by Distributors of In-Between Grades of Bond Papers—Demand for Various Grades of Paper Stock Rather Light

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., April 30, 1934.—The forecast this week in both major branches of the paper trade—the fine and the course—showed evidences of a moderate recession. Meanwhile there is much discussion here with regard to the in-between grades of paper as they relate to the proposed changes in the Paper Manufacturers' Code, especially as it pertains to the standards. In Philadelphia there is a situation existing where those handling the in-between grades have brought about a complex condition, in that they are selling bond paper with a 15 per cent rag basis, and those who are conforming to the standard classification, which calls for 25 per cent rag content, do not know whether to sit tight, or go after them on the basis of securing an equivalent of this grade themselves. The manufacturers refuse to say whether they will sit by and wait, or get out a bond paper of these in-between grades. The same is true of sulphite bond, and discussion centered principally around these two during the week.

Developments of importance, or almost of any sort, were lacking in the waste paper market. Demand continued limited, and prices appeared to be merely holding their own, with buyers in most instances operating at the lower edges of quotational ranges. A bright spot in the market was the call for old corrugated boxes, which seemed well sold up, and which commanded $8 per ton within the trade, brokers paying this figure for both dump and house packing of corrugated.

Association Activities

William H. Kilhour, president of Quaker City Paper Company, presided at a meeting of the Coarse Paper Division, held the latter part of the week at the Benjamin Franklin Hotel, the purpose of which was to enlighten those in the trade with regard to provisions of the open price reporting plan, as it relates to kraft and bags. Twenty-one houses were represented at this luncheon gathering and all were notified that prices were to be in the hands of The Philadelphia Paper Trade Association, Drexel Building, by May 2.

The annual banquet of the Waste Paper Merchants Association was held during the month at the Penn-Athletic Clubhouse, with an attendance of three hundred and fifty members and their guests. A very elaborate entertainment program was arranged, and all those present agreed that it was outstanding in point of comraderie in the association's annals.

News of the Trade

In last week's issue the name of Miss Dorothy C. Shelly was inadvertently omitted from the personnel of the Hooper Paper and Twine Company, Inc. in reporting the account of the 13th annual celebration of this firm at the Adelphia Hotel last Friday.

John C. Penton, of Claremont Paper Company, has joined the sales force of Cherry River Paper Company, whose offices are in the Pennsylvania Building.

J. R. Howarth, of J. R. Howarth Paper Company, so actively engaged in the compilation of a directory for promoting the interchange of business among the members of the Philadelphia Paper and Cordage Association, Inc., is confined to his home on account of illness.

The Matthias Paper Corporation is occupying its new quarters on the first floor of 421-27 Arch street, containing 10,000 square feet of floor space. Three new office employees have been added, and George Snyder, formerly with the National Metal Edge Box Company, has joined their sales force.

Announcement is made by the Champion Coated Paper Company, Hamilton, Ohio, of the appointment of Paper Merchants, Inc., 140 North 6th street, as general agents for the distribution of Champion Papers, including Hingefold Coated Cover, Hingefold Enamel, Stain Proof Enamel, Parian Dull Coated, Satin-Refold Enamel, Dullofold Coated, Hamilton Enamel, Falcon Enamel, Cororkote Enamel, Lithoprint Coated Label, Wedgewood English Finish, Garamond English Finish, Garamond Super, Lexicon English Finish, Lexicon Super, Lexicon Antique, Lexicon M. F. Litho, Lexicon Super Litho, Ohio MF, Ohio Super, Celopaque Catalog, Garamond Wove Text, Garamond Laid Text, and Wedgwood Offset.

Thomas W. Price Company has recently added to their extensive lines Production English finish book paper, manufactured by Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. The Price company also announces that enlargement of its sales force is in contemplation.

Tyler Stanton, representing the Racquette River Paper Company of Potsdam, New York, called on the trade during the week with a complete line of sulphite bonds and writing papers. Mr. Stanton was formerly connected with the Gilman Paper Company, of New York.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 2, 1934.—The Government Printing Office has received the following bids for 5,000 pounds (35,000 sheets) of 28 x 34, 25 per cent rag white ledger paper: Aetna Paper Company, at 12.61 cents per pound. Bids were received at the identical price of 12.61 cents per pound from the following: Old Dominion Paper Company, Reese & Reese, Inc., R. P. Andrews Paper Company, Barton, Duer & Koch Paper Company, Virginia Paper Company, Mathers-Lamm Paper Company, Carew Manufacturing Company; Whiting Paper Company, Walker-Goulard-Plehn Company, Inc.; H. C. Davis Paper Company, Perkins-Goodwin Company, Coy, Hunt & Co., L. Hyman & Sons, and the Marquette Paper Company.

The Import Paper Company has been awarded the contract for furnishing the Government Printing Office with 10,000 pounds (308,000 sheets) of 21 x 32, No. 18 yellow sulphite paper at 9.75 cents per pound less 2 per cent, bids for which were received on April 11.

The Mathers-Lamm Paper Company has been awarded the contract for furnishing the Government Printing Office with 19,000 pounds (7,960 sheets) of best quality, hard rolled binders board, various sizes at $94.50 per ton, bids for which were received on April 18.

Obituary

Edwin McLellan

GLEN PARK, N. Y., April 30, 1934—Word has reached here of the death of Edwin McLellan, who has been officially connected with the mills of J. R. Booth & Sons Company, at Ottawa, Canada, for the past thirty years. He was well known here when a youth, where he started his career in the local branch of the International Paper Company. After leaving here he went to Ottawa and secured the position as superintendent of the Booth mills. He had been in ill health for the past few years, which forced him to relinquish his usual business duties to some extent. The deceased gained considerable recognition as an inventor and a few years ago secured a patent on a felt dryer which has since been manufactured and placed on the market.

Albert L. Leonhard

RIDGEWOOD, N. J., April 30, 1934—Albert L. Leonhard, president of the Paterson Parchment Paper Company, which used to be in Passaic but now is in Bristol, Pa., died April 26 at his home here, 146 Phelps road. He also was vice-president of the Theodore Leonhard Wax Company, of Haledon, N. J. Surviving are his wife, the former Miss Adeline Sutton; a daughter, Mrs. H. R. McKenzie; a son, E. R. Leonhard; a brother, George L. Leonhard, and a sister, Mrs. Fannie A. Brunner.

Walter Birnie

[FROM OUR REGULAR CORRESPONDENT]

SPRINGFIELD, Mass., May 1, 1934—Walter Birnie, 62, secretary of the membership bureau of the Springfield Chamber of Commerce, died suddenly, Friday night at his home, 35 Ridgewood Avenue. Before being connected with the Chamber, he had been with the Birnie Paper Company, of Brightwood, for thirty years as secretary, assistant treasurer, and finally as treasurer of the company.

Thomas F. Dillon

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., May 1, 1934—Thomas F. Dillon, well known in local paper-making circles, and mill superintendent for a number of years, died Tuesday night at his home, 14 Parker street, after a short illness. He was born in Texas, but spent the greater part of his life here. He had been superintendent of the Whitemore Manufacturing Company, and Chemical Paper Company, in the older days, and later was superintendent of several mills of the American Writing Paper Company. He left two daughters, Margaret and Agnes, both at home; one son, Thomas F., Jr., and one brother, Joseph, all of Holyoke. The funeral was held Friday morning with burial in St. Jerome Cemetery.

Starts Annual Log Drive

[FROM OUR REGULAR CORRESPONDENT]

LYONS FALLS, N. Y., April 23, 1934—The Gould Paper Company has started its annual log drive in the Adirondacks and a large force of lumber-jacks are being employed on the project. Officials announced that the pulpwood supply would be received from timber left from last year and that they did not plan to place any new supply in the Moose River this year. The drive this year is from the village of McKeever to this village and about 35 men are being employed. Every available log is being shipped down the Moose River and it is expected that the drive will be completed within two weeks. It is customary for the company to observe this event yearly in obtaining its pulpwood supply.

Hear Tax Cases at Holyoke

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., May 1, 1934.—Hearings on the cases of the Chemical Paper Manufacturing Company and Crocker-McElwain Company on appeal to the State Tax Board of Appeals from the assessments of their properties here the past few days has opened up many points of interest to paper manufacturers and other manufacturers on the question of the values of properties.

The contention of the paper companies is that the mill powers or rights to draw water from the canals do not add any value to their land. The assessors of the City of Holyoke for years have based their assessment in part on the "enhanced value" to the land by reason of such water powers.

The laws of the state do not allow of the direct taxing of water power. Prof. Harold K. Barrows, professor of hydraulic engineering at the Massachusetts Institute of Technology, testifying as expert for the City of Holyoke, set the value of this enhancement in the case of the Chemical Paper Manufacturing Company at $250,000. He figured the replacement value of the Chemical hydraulic plant at $107,000.

Hearing for Pulp and Paper Machinery

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 2, 1934.—A public hearing on the proposed code of fair competition for the pulp and paper machinery industry, a proposed subdivision of the machinery and allied products industry, will be held by Deputy Administrator L. J. Martin, on May 10, in the Carlton Room of the Carlton Hotel, it was announced by the National Recovery Administration.

The code, sponsored by the Pulp and Paper Machinery Association, would provide that the industry carry on under the wage, hour and labor provisions of the basic code. The board of directors of the association would act as a temporary code authority for a period of sixty days during which a permanent body would be elected consisting of five members.

The Code Authority would be empowered to set up a uniform cost accounting system, open price lists would be filed and selling below cost would be forbidden. The industry has provided in its code that it may withdraw from the basic code upon thirty days notice, provided the action is approved by two-thirds of the industry.

Good Showing by Crown Zellerbach

[FROM OUR REGULAR CORRESPONDENT]

SEATTLE, Wash., April 28, 1934.—With its fiscal year ending April 30, the Crown Zellerbach Corporation is expected to record a larger profit than in any year since 1930. Improved business during the last year with a bright outlook for the future are voiced by Zellerbach interests.

A net profit of $1,016,000 was reported for the initial nine month period of the corporation's fiscal year, as compared with a net loss incurred of $71,428 for the full fiscal year ended April 30, 1933, net profit of $1,512,498 in the 1932 fiscal annum and a profit of $1,295,472 registered for the 1931 fiscal year.

The statement of Dow, Jones & Co. points to the fact that this year's showing is expected to make a more impressive showing in comparison with preceding years than generally anticipated. This is because profit on the purchase and retirement of bonds has not been credited to income during the past two years, but has been carried over directly to surplus, while the company's net profit in 1932 was swelled more than a half million dollars by including bond profit in that year's income.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING APRIL 28, 1934

CIGARETTE PAPER

P. J. Schweitzer, Pr. Johnson, Marseilles, 3 cs.; Champagne Paper Corp., Paris, Havre, 559 cs.; American Tobacco Co., Pr. Roosevelt, Havre, 150 cs.; ——, Pulaski, Gdynia, 61 cs.

PAPER HANGINGS

W. H. S. Lloyd, American Merchant, London 3 cs., 1 ble.

NEWSPRINT

Jay Madden Corp., Stuttgart, Bremen 133 rolls; Jay Madden Corp., Scanstates, Helsingfors, 188 rolls; Jay Madden Corp., A. Ballin, Bremen, 138 rolls; Perkins Goodwin & Co., A. Ballin, Hamburg, 511 rolls; ——, Pr. Roosevelt, Hamburg, 111 rolls.

PRINTING PAPER

International F'd'g Co., Black Hawk, Antwerp, 16 rolls; ——, Stuttgart, Bremen, 17 bls., 74 rolls; Senefelder Co., A. Ballin, Hamburg, 8 cs.

WRAPPING PAPER

Scharf Bros. Co., Bloomersdyk, Rotterdam, 4 cs.; F. C. Strype, Black Hawk, Antwerp, 1 cs.; ——, Pr. Johnson, Genoa, 13 cs.; F. C. Strype, Dakotian, Antwerp, 3 cs.; Walker Goulard Plehn Co., Pr. Roosevelt, Hamburg, 853 rolls; Steiner Paper Corp., A. Ballin, Hamburg, 30 cs.; Borden Riley Paper Co., A. Ballin, Bremen, 10 cs.

PACKING PAPER

Gevaert Co. of America, Dakotian, Antwerp, 2 cs.

FILTER PAPER

H. Reeve Angel & Co. Inc., American Merchant, London, 13 cs.; H. Reeve Angel & Co. Inc., Olympic, Southampton, 11 cs., 35 bls.

FILTER MASSE

H. Reinfenberg, Pr. Roosevelt, Hamburg, 100 bls.

SURFACE COATED PAPER

Globe Shipping Co., Stuttgart, Bremen, 32 cs.; Globe Shipping Co., Europa, Bremen, 20 crates; Gevaert Co. of America, Dakotian, Antwerp, 30 cs.; L. A. Consmiller, A. Ballin, Hamburg, 5 cs.

METAL COATED PAPER

K. Pauli Co., A. Ballin, Hamburg, 11 cs.

COATED PAPER

Chas. Happel, A. Ballin, Hamburg, 2 cs.

BASIC PAPER

Globe Shipping Co., A. Ballin, Bremen, 51 cs.; Dingelstedt & Co., A. Ballin, Bremen, 3 cs.

PHOTO PAPER

J. J. Gavin, Aquitania, Southampton, 1 cs.

COLORED PAPER

P. H. Petry & Co., Stuttgart, Bremen, 10 cs.; Borden Riley Paper Co., Dakotian, Antwerp, 2 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co. Scythia, Liverpool, 4 cs. (duplex).

DECALCOMANIAS

L. A. Consmiller, Europa, Bremen, 5 cs.; Sellers Transportation Co., Europa, Bremen, 32 cs.

TRANSFER PICTURES

Rohner Gehrig & Co., Europa, Bremen, 13 cs.

TISSUE PAPER

B. F. Drakenfeld & Co., Scythia, Liverpool, 2 cs.; F. C. Strype, Scythia, Liverpool, 48 cs.

WRITING PAPER

Chas. Bloom, Inc., Pr. Roosevelt, Havre, 1 cs.

MISCELLANEOUS PAPER

Walker Goulard Plehn Co., Bloomersdyk, Rotterdam, 16 bls; Steiner Paper Corp., Bloomersdyk, Rotterdam 8 cs.; Keller Dorian Paper Co., Pr. Johnson, Marseilles, 2 cs.; Keuffel & Esser Co., Pr. Roosevelt, Hamburg, 22 cs., 33 rolls.

RAGS, BAGGINGS, ETC.

E. J. Keller Co. Inc., Bloomersdyk, ——, 55 bls. bagging; ——, Clara, Venice, 147 bls. rags; Chase National Bank, Black Hawk, Antwerp, 244 bls. cotton waste; N. Schwab & Son, Black Hawk, Antwerp, 27 bls. cotton waste; E. J. Keller Co. Inc., Black Hawk, ——, 467 bls. rags; E. J. Keller Co. Inc., Black Hawk, ——, 105 bls. bagging; Irving Trust Co., Stuttgart, Bremen, 69 bls. rags; Chase National Bank, American Merchant, London, 79 bls. rags; Chase National Bank, Paris, Havre, 100 bls. bagging; Chase National Bank, Tana, Genoa, 12 bls. bagging; Banco Coml Italiane Trust Co., Tana, Naples, 279 bls. rags; Castle & Overton, Inc., Clairton, Dundee, 119 bls. paper stock; Thermwood Products Co., Clairton, Dundee, 25 bls. paper stock; Chase National Bank, Clairton, Dundee, 41 bls. paper stock; ——— Clairton, Dundee, 167 bls. paper stock; Darmstadt Scott & Courtney, A. Ballin, Bremen, 188 bls. jute card waste; E. J. Keller Co. Inc., Ingria, ——, 185 bls. rags; E. J. Keller Co. Inc., Collamer, ——, 146 bls. rags; E. J. Keller Co. Inc., Collamer, ———, 111 bls. bagging.

GLUE STOCK, ETC.

Darmstadt Scott & Courtney, Bloomersdyk, Rotterdam, 418 bls. glue stock; Uniform Chemical Products Co., Stuttgart, Bremen, 27 bags hide glue.

OLD ROPE

Chase National Bank, New York City, Bristol, 88 coils; ——, Ingria, Barcelona, 51 coils.

CHINA CLAY

Orbis Products Trading Co., Scythia, Liverpool, 100 bags; English China Clays Sales Co., Scythia, Liverpool, 140 bags.

CASEIN

D. C. Andrews & Co., A. Ballin, Hamburg, 50 bags.

WOOD PULP

Lagerloef Trading Co., Scanstates, Helsingfors, 2,266 bls. sulphite, 398 tons; Castle & Overton, Inc., A. Ballin, Hamburg, 1,680 bls. wood pulp; Bank of N. Y. Trust Co., A. Ballin, Hamburg, 300 bls. woodpulp; Stora Kopparberg Corp., Argosy, Skutskar, 750 bls. wood pulp; Bank of N. Y. Trust Co., Argosy, Norrsundet, 875 bls. sulphate, 197 tons; Price & Pierce, Ltd., Argosy, Stugsund, 1,250 bls. mechanical, 250 tons; Price & Pierce, Ltd., Argosy, Wallvik, 150 bls. sulphate, 25 tons; Price & Pierce, Ltd., Argosy, Wallvik, 1,950 bls. sulphite, 325 tons; Perkins, Goodwin & Co., Argosy, Sundsvall, 900 bls. sulphate, 150 tons; Perkins, Goodwin & Co., Argosy, Gdynia, 600 bls. wood pulp, 92 tons.

WOOD PULP BOARDS

Lagerloef Trading Co., Scanstates, Helsingfors, 235 bls.; Lagerloef Trading Co., Scanstates, Helsingfors, 130 rolls; Johaneson Wales & Sparre, Inc., Pr. Roosevelt, Hamburg, 100 rolls.

PORTLAND IMPORTS

WEEK ENDING APRIL 28, 1934

Stora Kopparberg Corp., Argosy, Skutskar, 550 bls. wood pulp; Price & Pierce, Ltd., Argosy, Wallvik, 5250 bls. sulphate (875 tons); Gottesman & Co., Inc., Argosy, Sundsvall, 2400 bls. sulphite (400 tons).

BOSTON IMPORTS

WEEK ENDING APRIL 28, 1934

Royal Mfg. Co., Black Hawk, Antwerp, 22 bls. cotton waste; Forte Dupee Sawyer Co., Black Hawk, Antwerp, 42 bls. rags; S. Frankenhuis & Co., Black Hawk, Antwerp, 56 bls. cotton waste; International Purchasing Co., Black Hawk, Antwerp, 62 coils old rope; ——, Scythia, Liverpool, 528 bags hide cuttings; Oxford University Press, Scythia, Liverpool, 11 cs. printing paper; G. F. Malcolm Co., Inc., Scythia, Liverpool, 24 cs. tissue paper; ——, Scythia, Liverpool, 15 bls. rags; Stora Kopparberg Corp., Argosy, Skutskar, 3925 bls. wood pulp; Price & Pierce, Ltd., Argosy, Wallvik, 3450 bls. sulphite (590 tons); Price & Pierce, Ltd., Argosy, Stugsund, 500 bls. chemical pulp (100 tons); Bank of N. Y. Trust Co., Argosy, Norrsundet, 1450 bls. sulphate (311 tons); Perkins Goodwin & Co., Argosy, Sundsvall, 1200 bls. sulphate (200 tons).

PHILADELPHIA IMPORTS

WEEK ENDING APRIL 28, 1934

E. J. Keller Co., Inc., Black Hawk, ——, 250 bls. rags; ——, Black Hawk, Antwerp, 75 bls. rags; Lagerloef Trading Co., Scanstates, Helsingfors, 736 bls. wood pulp boards (83 tons); J. W. Hampton Jr. Co., Scanstates, Helsingfors, 90 rolls newsprint; Lagerloef Trading Co., Scanstates, Helsingfors, 2297 bls. sulphite (434 tons); Lagerloef Trading Co., Scanstates, Helsingfors, 1870 bls. sulphate (312 tons); E. J. Keller Co., Inc., Ingria, ——, 93 bls. rags; Trust Co. of North America, Ingria, Valencia, 81 bls. rags; Bank of Manhattan Co., Clairton, Hamburg, 80 bls. rags; Stora Kopparberg Corp., Argosy, Skutskar, 525 bls. wood pulp; Bank of N, Y. Trust Co., Argosy, Norrsundet, 250 bls. sulphate (53 tons); Price & Pierce, Ltd., Argosy, Stugsund, 250 bls. mechanical (50 tons); Price & Pierce, Ltd., Argosy, Wallvik, 600 bls. sulphite (100 tons); Price & Pierce, Ltd., Argosy, Wallvik, 600 bls. sulphate (100 tons); E. J. Keller Co., Inc., Exporter, ——, 239 bls. rags; Bulkley Dunton & Co., Augsburg, ——, 500 bls. wood pulp; ——, Cliffwood, Hango, 2568 bls. sulphite; The Borregaard Co., Inc., Georgia, Hurum, 1800 lbs. sulphite; J. Andersen & Co., Georgia, Sarpsborg, 500 bls. sulphite.

BALTIMORE IMPORTS

WEEK ENDING APRIL 28, 1934

——, Clairton, London, 87 coils old rope; Bulkley Dunton & Co., Skagern, ——, 125 bls. wood pulp; Bulkley Dunton & Co., West Arrow, ——, 2780 bls. wood pulp; Bulkley Dunton & Co., City of Norfolk, ——, 1300 bls. wood pulp.

Southern Chemical Corp. Formed

American Cyanamid Company and Pittsburgh Plate Glass Company jointly have formed the Southern Chemical Corporation, with a Delaware charter, and have qualified to do business in Texas. The new corporation will produce a varied line of chemicals in conection with the operation of the alkali plant being constructed at Corpus Christi, Texas, by Southern Alkali Corporation, also jointly owned by the two above mentioned companies.

The officers of Southern Chemical Corporation are as follows: Chairman, W. B. Bell; President, H. L. Derby; Vice-Presidents, C. M. Brown, K. F. Cooper, H. A. Galt, and H. S. Wherrett; Treasurer, R. C. Gaugler; Assistant Treasurers, A. B. Savage and K. C. Towe; Secretary, W. P. Sturtevant; Assistant Secretaries, J. H. Heroy and G. R. Martin.

It is expected that the plant at Corpus Christi, which has been under construction for something over a year, will be in operation this Fall. A thirty foot channel is being dredged to the private dock which will enable ocean-going vessels to load and unload at the plant and will greatly facilitate handling the export and coastwise business which Southern Chemical Corporation expects to transact.

Botfield Improved Prepared Chrome Cement

Latest of developments in the line of Adaproducts offered by Botfield Refractories Company, Swanson and Clymer streets, Philadelphia, Pa., is an improved chrome base refractory cement which is shipped in prepared, ready-to-use form in 250 lb. and 500 lb. metal drums with air-tight, replaceable full-opening covers.

The improved material is being marketed under the trade name of Adachrome super-cement and is said to be unique in that its component materials will not settle in the drum or mortar box but remain in suspension indefinitely.

Adachrome super-cement is usable in making dipped or troweled joints and in addition to laying up fire brick can also be employed for surfacing work. When mixed with Adachrome grog or similar material, it is adaptable for patching work or the making of furnace hearths or other monolithic refractory construction. The cement can be used with fire clay brick, high alumina brick, silica brick, chrome brick and magnesite brick in all types of boiler furnaces and industrial furnaces where temperatures are fairly high or where chemical reactions occur. The cement is available generally at a price comparable to that of clay base cements.

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New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, May 2, 1934.

Conditions in the local paper market continue favorable. Demand for the various standard grades of paper is fairly active. Sales forces of the leading paper organizations are conducting a strenuous campaign for orders. Prices are generally holding to previously quoted levels.

The newsprint paper market is showing signs of improvement. Production in the United States and Canada has been speeded to meet the increased demand from the publishers. Advertising volume in the New York newspapers is running well ahead of the corresponding period last year.

Business in the fine paper market is satisfactory for the time of year. Writing and cover papers are in good request. Prices are holding to schedule, in most instances. Tissues are moving freely. The coarse paper market is marking time. Paper board quotations are holding up well.

Mechanical Pulp

Steadiness prevails in the ground wood pulp market. Manufacturing operations in this country and abroad are practically keyed to consumption and the statistical position of the industry is considered sound. The contract movement is normal. Quotations on both domestic and foreign grades are firm.

Chemical Pulp

The chemical pulp market is exhibiting a fairly strong undertone. Demand for the various domestic and imported grades is normal for the season. Supplies are moving into consumption in satisfactory volume. Prices are holding to schedule and there are no reports of shading around.

Old Rope and Bagging

Paper mill demand for old rope is listless. Both domestic and imported old manila rope are attracting little interest at present. Small mixed rope is dull. The bagging market is irregular. While there is some call for gunny bagging, demand for scrap bagging is somewhaf restricted.

Rags

The position of the domestic rag market is practically unchanged. Demand for new cotton rags is fairly brisk. No. 1 white shirt cuttings are displaying strength, with offerings scarce and quotations firm. More interest is also being shown in old domestic rags. The imported rag market is marking time.

Waste Paper

Board mill demand for the lower grades of paper stock is fairly persistent. Strictly over-issue news quotations are firm. Strictly folded news and No. 1 mixed paper continue steady. No radical changes have transpired in the higher grades of waste paper. Prices are generally well sustained.

Twine

Most of the business transacted in the local twine market during the past week was routine. Demand for the various grades, however, is considered satisfactory for the time of year. Supplies are moving into consumption at a fairly steady pace. Despite keen competition, prices are more stable than of late.

Spotted Demand in Indianapolis

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., April 30, 1934.—Paper demand in this territory seems to have been a little spotted last week, but prices are being uniformly held and there is little complaint of code violations. Those minor violations that are complained of seem to be because of a misunderstanding of code provisions and not committed with malice aforethought. As compared with other lines of business, the paper trade has little about which to worry. Volume is considerably better in all lines than a year ago and much better in some.

Demand for newsprint continues to mount. The volume being used in this state is increasing steadily and the increase is particularly noticeable in the industrial cities where papers are much thicker and lineage is much increased. The agricultural papers are about the same as they have been, but they did not drop in size as did the larger city papers during the depression. Prices are steady.

Tissues and summer specialties are moving to some extent, but not as readily as the trade expected for this time of the year. Continued cool weather has handicapped this business. Initial orders on the part of retailers have been placed and for the most part delivered and, it is expected, there will be no reorders until the weather turns much warmer.

The container trade is holding up very well and virtually all the factories in this state are producing about in the same volume as has been the rule for some weeks. The strawboard factories are reporting slightly increased business and many of them are working from eighteen to 24 hours a day.

Fine papers and covers are moving about the same as a week ago. Some jobbers report a very slight improvement last week over the week before and the general condition of the market is sound.

Paper stock men here are more encouraged. Demand for the better grade of rags continues to improve and prices at the mill are holding firm. Lower grade rags are not so much in demand, it is reported, but some mill inquiries are being received.

H. Horwitz & Sons To Handle Paper Stock

H. Horwitz & Sons, Inc., of 645-649 Broad street, Utica, N. Y., have opened a paper stock department in conjunction with their business in new and old cotton and woolen rags, and the new department will be managed by Lester E. Stewart, formerly of L. E. Stewart & Co., Ltd., of Albany, N. Y.

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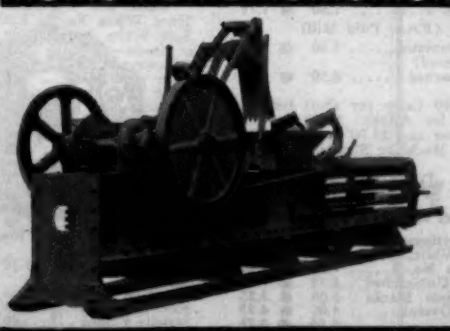

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THE OHIO CULTIVATOR CO., Bellevue, Ohio

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, May 2, 1934.

BLANC FIXE.—Steadiness prevails in the blanc fixe market. The contract movement is well up to average. The pulp is quoted at from $42.50 to $45 per ton, in bulk; while the powder is selling at from 3½ to 3¾ cents per pound, in barrels, at works.

BLEACHING POWDER.—The bleaching powder market is exhibiting a fairly strong undertone. Contract shipments are moving regularly. Prices are holding to schedule. Bleaching powder is quoted at from $1.90 to $2.15 per 100 pounds, in drums, at works.

CASEIN.—The casein market continues firm. Domestic standard ground is quoted at 12½ cents and finely ground at 13½ cents per pound. Argentine standard ground is selling at 14¾ cents and finely ground at 15 cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—The position of the caustic soda market is practically unchanged. Prices remain steady. Solid caustic soda is quoted at from $2.60 to $3.10; while the flake and ground are selling at from $3 to $3.05 per 100 pounds, in large drums, at works.

CHINA CLAY.—Conditions in the china clay market are satisfactory. Prices are steady and unchanged. Imported china clay is quoted at from $13.50 to $21 per ton, ship side; while domestic paper makers clay is selling at from $5 to $12 per ton, at works.

CHLORINE.—The chlorine market is displaying strength. Shipments against contract are moving freely. Prices are holding to schedule, without difficulty. Chlorine is quoted at from $2 to $2.25 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—The rosin market is slightly softer. The grades of gum rosin used in the paper mills are quoted at from $5.95 to $6.25 per 280 pounds, in barrels, at works; while wood rosin is selling at $4.90 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Business in the salt cake market is fairly buoyant. Prices are well maintained. Salt cake is quoted at from $12 to $14; chrome salt cake at from $12 to $12.50 per ton, at works; and imported salt cake at from $12 to $12.50 per ton, on dock.

SODA ASH.—The soda ash market is seasonally active. The contract movement is normal. Prices are holding to schedule, and the outlook is bright. Quotations on soda ash, in car lots, at works, are as follows: in bulk, $1.10; in bags, $1.40; and in barrels, $1.50.

STARCH.—The starch market is practically marking time. Supplies are moving into consumption in fairly good volume. Special paper making starch is still quoted at $2.67 per 100 pounds, in bags; and at $2.95 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—Demand for sulphate of alumina is fairly persistent. The contract movement is satisfactory. Commercial grades are quoted at from $1.35 to $1.50; while iron free is selling at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market continues steady. Sulphur is quoted at $18 per long ton on orders of 1,000 tons, or over, on yearly contracts; and at $20 per ton on any smaller quantity over that period. On spot and nearby car loads, the quotation is $21 per ton.

TALC.—Most of the business transacted in the talc market during the past week was routine. Prices are steady. Domestic talc is quoted at from $16 to $18 per ton, in bulk, at eastern mines; while imported talc is selling at from $23 to $30 per ton, on dock.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	6.50	@	—
Bonds	6.00	@	—
Index	6.00	@	—
Writings—			
Extra Superfine	6.50	@	—
Superfine	6.25	@	—
Tub sized	5.75	@	—
Engine sized	5.50	@	—
Book, Cased—			
S. & S. C.	5.35	@	5.75
S. & S. C. Litho.	5.60	@	6.00
M. F.	5.10	@	5.50
Coated and Enamel	5.90	@	6.55
Coated Litho	5.90	@	6.55
Tissues—Per Ream—			
White No. 1	.82½	@	.85
White No. 2	.67½	@	—
Anti-Tarnish M. G. only	1.00	@	—
Colored	.85	@	—
Kraft	.70	@	—
Manila	.67½	@	.70
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.00	@	5.25
No. 2 Wood	3.50	@	4.00
Butchers	4.00	@	4.50
Fibre Papers—			
No. 1 Fibre	4.25	@	5.50
No. 2 Fibre	4.00	@	4.75
Common Bogus	1.50	@	1.00
Screenings	2.50	@	3.50
Glassine—			
Bleached	.11	@	—
Unbleached	.09	@	—

(The following Quotations are Delivered New York)

News, per ton—			
Roll, contract	40.00	@	—
Rolls, spot	40.00	@	—
Sheets	45.00	@	—
Kraft—			
No. 1 Domestic	4.75	@	5.00
No. 2 Domestic	3.87½	@	—
Southern	3.87½	@	—
Boards—per ton—			
News	45.00	@	50.00
Chip	42.50	@	47.50
Sgl. Mla. Ll. Chip	52.50	@	55.00
Jute Lined Chip	52.50	@	55.00
White Patent Coated	65.00	@	70.00
Binders Boards	68.00	@	72.00

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported—			
Moist	27.00	@	29.00
Dry	27.00	@	30.00
(F.o.b. Mill)			
No. 1 Domestic and Canadian	24.00	@	29.00

Chemical Pulp

(On Dock, Atlantic, Gulf and West Coast Ports)

Bleached Sulphite (Domestic and Foreign)—			
Division 1	2.85	@	—*
Division 2	2.80	@	—*
Division 3	2.75	@	—*
Prime Qualities—			
Class 1. All Prime Easy Bleaching	2.25	@	—*
Other Than Easy Bleaching—			
Class 2. Higher Than Standard	2.20	@	—*
Class 3. Standard	2.15	@	—*
Class 4. Lower than Standard	2.10	@	—
(On Dock, Atlantic Ports)			
Kraft No. 1	1.85	@	1.90
Kraft No. 2	1.60	@	1.70
(F.o.b. Pulp Mill)			
Kraft Domestic	1.60	@	2.75
(Delivered)			
Soda Bleached	2.50	@	—

*Add 60 Cents per short ton, dock charges, for Albany; $2.00 for Lake Ports East and $3.00 for Lake Ports West of Mackinac Straits.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	6.50	@	7.00
Silesias No. 1	4.25	@	4.50
New Unbleached	6.75	@	7.25
New Soft Blacks	3.00	@	3.25
Blue Overall	4.00	@	4.25
Fancy	2.50	@	2.75
Washables	1.75	@	2.00
Mixed Khaki Cuttings	3.00	@	3.25
O. D. Khaki Cuttings	3.75	@	4.00
Men's Corduroy	1.50	@	1.75
New Mixed Blacks	2.50	@	2.75

Old Rags

White, No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.75	@	3.25
White, No. 2—			
Repacked	1.75	@	2.25
Miscellaneous	1.50	@	1.75
Thirds and Blues—			
Repacked	1.50	@	1.75
Miscellaneous	1.25	@	1.50
Black Stockings	2.50	@	3.00
Roofing Rags—			
No. 1	1.10	@	1.25
No. 2	.80	@	.85
No. 3	.70	@	.75
No. 4	.65	@	.70
No. 5A	.60	@	.65

Foreign Rags

New Rags

New Dark Cuttings	1.60	@	1.70
New Mixed Cuttings	1.75	@	1.85
New Light Silesias	3.75	@	4.00
Light Flannelettes	3.75	@	4.00
Unbleached Cuttings	6.50	@	6.75
New White Cuttings	6.50	@	6.75
New Light Oxfords	3.25	@	3.50
New Light Prints	2.75	@	3.00

Old Rags

No. 1 White Linens	7.50	@	8.00
No. 2 White Linens	6.50	@	7.00
No. 3 White Linens	4.50	@	5.00
No. 4 White Linens	2.25	@	2.50
No. 1 White Cotton	4.25	@	4.75
No. 2 White Cotton	3.25	@	3.75
No. 3 White Cotton	2.50	@	2.75
No. 4 White Cotton	1.90	@	2.15
Extra Light Prints	2.00	@	2.25
Ord. Light Prints	1.75	@	1.85
Med. Light Prints	1.55	@	1.65
Dutch Blue Cottons	1.75	@	1.85
French Blue Linens	2.30	@	2.40
German Blue Linens	2.15	@	2.25
German Blue Cottons	1.70	@	1.80
Checks and Blues	1.30	@	1.40
Linsey Garments	1.50	@	1.75
Dark Cottons	1.15	@	1.30
Old Shopperies	1.00	@	1.10
New Shopperies	.90	@	1.00
French Blues	1.70	@	1.80

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.50	@	1.60
Domestic	1.40	@	1.50
Wool Tares, light	1.20	@	1.30
Wool Tares, heavy	1.25	@	1.35
Bright Bagging	1.20	@	1.30
Manila Rope—			
Foreign	2.40	@	2.50
Domestic	2.50	@	2.75
Small Mixed Rope	1.10	@	1.35
New Burlap Cut	2.00	@	2.25
Hessian Jute Threads—			
Foreign	2.60	@	2.75
Domestic	2.80	@	3.00

Old Waste Papers

(F. o. b. New York)

Shavings—			
White Envelope Cuttings	2.70	@	2.80
Ordinary Hard White No. 1	2.35	@	2.45
Hard White No. 2	2.10	@	2.20
Soft White No. 1	1.90	@	2.00
Flat Stock—			
Stitchless	.85	@	.95
Over issue Mag.	.85	@	.95
Solid Flat Book	.70	@	.85
Crumpled No. 1	.65	@	.75
Solid Book Ledger	1.50	@	1.65
Ledger Stock	1.05	@	1.15
New B. B. Chips	.30	@	.35
Manilas—			
New Env. Cut	1.70	@	1.80
New Cuttings	1.35	@	1.45
Print	Nominal		
Bogus Wrapper	.40	@	.50
Container	Nominal		
Old Kraft Machine—			
Compressed bales	1.10	@	1.20
News—			
No. 1 White News	1.10	@	1.20
Strictly Overissue	.70	@	1.25
Strictly Folded	.40	@	.50
No. 1 Mixed Paper	.25	@	.30

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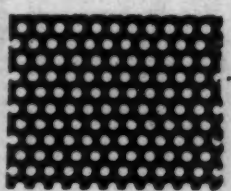
For Pulp and Paper Mills
STEEL, COPPER, BRASS, BRONZE, MONEL METAL and other Alloys punched for Centrifugal and Rotary Screens, Pulp Washers, Drainer Bottoms, Filter Plates, etc.

".065" Round
CHARLES MUNDT & SONS
63-65 FAIRMONT AVE. JERSEY CITY, N. J.

PAPER MAKERS IMPORTING CO. INC. EASTON, PENNSYLVANIA U.S.A.
FINEST PAPER CLAYS

CLINTON STARCHES
Special Grades for Beater and Top Sizing
Manufactured by
CLINTON COMPANY
CLINTON, IOWA
QUALITY SERVICE

Twines
(F. o. b. Mill)

Cotton—			
B. C. 18 basis	.20	@	.22
No. 1	.20	@	.22
No. 2	.19	@	.20
No. 3	.17	@	.18
A. Italian, 18 basis	.36	@	.37
Finished Jute—			
Dark, 18 basis	.18	@	.20
Light, 18 basis	.20	@	.22
Jute Wrapping, 3-6 Ply—			
No. 1	.15¾	@	.16½
No. 2	.15	@	.16
Tube Rope—			
4-ply and larger	.09¼	@	.09¾
Fine Jute Rope—			
4-ply	.11¾	@	.11¾
3-ply	.14¾	@	.14¾
2-ply	.14¾	@	.14¾
Paper Makers Twine	.08¾	@	.13¾
Box Twine, 3-3 ply	.14¼	@	.14¾
White Hemp	.13¾	@	.16¾
Java Sisal—			
No. 1 Basis	.11½	@	—
No. 2 Basis	.10½	@	—
New Zealand Sisal	.11½	@	—
Sisal Lath Yarn—			
No. 1	.13½	@	.15½
No. 2	.11½	@	.13½
Manila Twine	.24½	@	.29½

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.12	@	.50
Water Marked Sulphite Bond	.06½	@	.15
Sulphite Bond	.05½	@	.15
Superfine Writing	.18	@	.—
No. 1 M. F. Book	.06½	@	.07½
No. 2 M. F. Book	.05½	@	.06½
No. 1 S.&S.C. Book	.06¼	@	.07¼
No. 2 S.&S.C. Book	.05¼	@	.06½
Coated Book	.07	@	.12
Coated Label	.07	@	.08½
No. 1 Manila	.04½	@	.05½
No. 1 Fibre	.04¼	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.03¼	@	.03¾
No. 1 Kraft	4.75	@	5.00
Southern Kraft	3.88	@	4.25
No. 2 Kraft	3.88	@	4.25
Wood Tag Boards	.04¼	@	.06½
Sulphite Screenings	.03	@	.03¼
Manila Tissue	.05¾	@	.07
White Tissue	.07	@	.09

(Delivered Central Territory)

News, per ton—			
Rolls, contract	41.00	@	—
Sheets, open	46.00	@	51.00
Boards, per ton—			
Plain Chip	46.50	@	—
Solid News	50.00	@	—
Manila Lined Chip	55.00	@	—
Patent coated	65.00	@	—
Container Lined—			
85 Test, per 1000 sq. ft.			1.70
100 Test, per 1000 sq. ft.			1.85

Old Papers
(F. o. b. Chicago)

Shavings			
No. 1 White Envelope cuttings	1.70	@	2.00
No. 1 Hard White	1.40	@	1.65
No. 1 Soft White	1.25	@	1.50
Ledger & Writings	.70	@	.80
Solid Books	.60	@	.70
Blanks	1.00	@	1.05
Kraft	.80	@	.90
New Kraft Cuts	1.20	@	1.30
Manila Env. Cuts	1.25	@	1.30
Ex. No. 1 Manila	.90	@	1.00
Print Manila	.50	@	.55
Overissue News	.60	@	.70
Old Newspapers—			
No. 1	.50	@	.55
Mixed Papers—			
No. 1	.30	@	.35
Roofing Stocks—			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.04	@	.40
Ledgers	.06	@	.40
Writings—			
Superfine	.10	@	.18
Extra Fine	.15	@	.26
Fine	.15	@	.26
Fine, No. 2	.10	@	.25
Fine No. 3	.05½	@	.18
Book, M. F.	.04¾	@	.07
Book, S. S. & C.	.05	@	.07½
Book, Coated	.06	@	.16
Coated Lithograph	.06	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.06	@	.10
Manila Sul., No. 1	.03	@	.06
Manila No. 2	.03	@	.05
No. 1 Kraft	.05¼	@	.06½
No. 2 Kraft	.03¾	@	.05
Southern Kraft	2.75	@	4.00
Common Bogus	.03	@	.04½

(Delivered Philadelphia)

News Print Rolls	46.00	@	55.00
Straw Board	40.00	@	45.00
News Board	50.00	@	—
Chip Board	45.00	@	—
Wood Pulp Board	70.00	@	85.00
Binder Boards—			
No. 1, per ton	75.00	@	80.00
No. 2, per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	52.25	@	54.25
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.03½	@	.04
New White, No. 2	.02½	@	.04
Light Silesias	.02¼	@	.03
Silesias, No. 1	.03	@	.03½
Black Silesias, soft	.02½	@	.03
New Unbleached	.05	@	.05½
Washable, No. 1	.01½	@	.02
Blue Overall	.03½	@	.04
Cottons—According to grades—			
Washable, No. 2	.02½	@	.03
New Blue	.01½	@	.03
Fancy	.01½	@	.03
New Black Soft	.02	@	.04
New Light Seconds	.01½	@	.02
New Dark Seconds	1.50	@	1.75
Khaki Cuttings—			
No. 1 O.D.	.03	@	.04
No. 2 Mixed	.03	@	.04
Corduroy	.02	@	.03
New Canvas	.03½	@	.04½
New Black Mixed	.02½	@	.03½

Domestic Rags (Old)

White No. 1—			
Repacked	2.50	@	3.50
Miscellaneous	1.75	@	2.25
M. G.	3.00	@	3.75
Thirds and Blues—			
Miscellaneous	1.00	@	1.50
Repacked	1.50	@	2.00
Black Stockings (Export)	2.00	@	3.50
Roofing Stock—			
Foreign No. 1	.50	@	.75
Repacked	.70	@	.85

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.25	@	1.50
Domestic	1.50	@	1.75
Manila Rope	2.00	@	2.25
Sisal Rope	1.25	@	1.50
Mixed Rope	1.00	@	1.10
Scrap Burlaps—			
No. 1	1.25	@	1.50
No. 2	.80	@	1.00
Wool Tares, heavy	2.75	@	—
Mixed Strings	1.15	@	1.25
No. 1 New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.25	@	2.30
No. 2 Hard White	2.00	@	2.10
No. 1 Soft White	2.05	@	2.10
No. 2 Soft White	1.50	@	1.60
No. 1 Mixed	.95	@	1.00
No. 2 Mixed	.75	@	.80
Solid Ledger Stock	1.50	@	1.60
Writing Paper	1.25	@	1.50
No. 1 Books, heavy	.90	@	1.00
No. 2 Books, light	.70	@	.80
No. 1 New Manila	1.20	@	1.30
No. 1 Old Manila	.85	@	.90
Print Manila	.75	@	.80
Container Manila	.65	@	.70
Old Kraft	1.00	@	1.10
Common Paper	.35	@	.40
No. 1 Mixed Paper	.40	@	.45
Straw Board Chip	.40	@	.45
Binders Board Chip	.40	@	.45
Corrugated Board	.60	@	.70
Overissue News	.60	@	.65
Old Newspapers	.40	@	.50

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.06	@	.12½
Rag Content	.12	@	.30
All Rag	.36	@	.52½
Bonds—			
Sulphite	.05½	@	.11
Rag Content	.12	@	.30
All Rag	.36	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.04¾	@	.05
No. 2 Kraft	.03¾	@	.04½

(F. o. b. Boston)

Southern Kraft	.03¾	@	.04½

(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)

Common Bogus	.02	@	.02¾

(Delivered New England points)

News Print, rolls	44.50	@	—
Straw Board, rolls	.009	@	35.00
Straw Board in Sheets, basis 35s to 70s	—	@	40.00
Filled News Board	45.00	@	50.00
Chip Board	42.50	@	47.00
Chip Board (Creasing)	45.00	@	—
Single Manila Lined Chip	52.50	@	62.50
Single White, Patent Coated News Board—			
Bender	62.50	@	72.50
Wood Pulp Board	70.00	@	75.00
Binder Boards	62.00	@	75.00

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.20	@	2.35
No. 1 Soft White	1.75	@	2.00
No. 2 Mixed	.75	@	.80
Solid Ledger Books	1.75	@	—
Overissue Ledger Stock	1.15	@	1.30
Mixed Ledgers	.95	@	1.05
No. 1 Books, heavy	.85	@	.95
No. 1 Books, light	.65	@	.75
Crumpled Stitchless Book Stock	.50	@	.60
Manila Env. Cuttings	1.25	@	1.30
No. 1 Old Manila	.75	@	.80
White Blank News	1.05	@	1.10
No. 1 Kraft	1.10	@	1.15
Manila	.70	@	.75
No. 1 Mixed Papers	.20	@	.25
Print Manila	.40	@	.45
Overissue News	.50	@	.55
Old Newspapers	.35	@	.40
Box Board Chips	.32½	@	.35
Corrugated Boxes	.35	@	40
Screening Wrappers	.60	@	.70

Bagging
(F. o. b. Boston)

Manila Rope—			
Foreign	—	@	2.25
Domestic	—	@	2.50
Transmission Rope	1.60	@	—
Mixed Strings	—	@	.60
Jute Rope	1.35	@	—
Jute Carpet Threads	.65	@	.70
Gunny No. 1—			
Foreign	1.55	@	—
Domestic	1.20	@	1.25
Bleachery Burlap	1.00	@	1.25
Scrap Burlap	1.15	@	—
Scrap Sisal	1.10	@	1.20
Scrap Sisal for shredding	1.25	@	1.35
Wool Tares, heavy	—	@	1.25
New Burlap Cuttings	1.35	@	1.60
Australian Wool Pouches	2.25	@	2.50
Heavy Baling Bagging	1.40	@	1.50
Paper Mill Bagging	.90	@	1.10
Bagging No. 2	.50	@	.55

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.02	@	.02¾
New White No. 1	.06½	@	—
New White No. 2	.04½	@	.05
Silesias No. 1	.04	@	—
New Black Silesias	.02½	@	.03
New Unbleached	.07	@	.07¾
Blue Cheviot	—	@	4.65
Fancy	—	@	.02½
Washable	.02¾	@	—
Cottons—According to grades—			
Blue Overalls	—	@	.03¾
New Black, soft	.04	@	.04½
Khaki Cuttings	.03	@	.03½
O. D. Khaki	.03	@	.03¾
Corduroy	.01¾	@	.02
New Canvas	—	@	.05
B.V.D. Cuttings	—	@	.06¾

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.00	@	2.25
White No. 2—			
Repacked	2.00	@	2.25
Miscellaneous	2.00	@	2.75
Twos and Blues	1.25	@	1.50
Thirds and Blues—			
Repacked	1.10	@	1.25
Miscellaneous	.85	@	.90
Black Stockings	2.25	@	2.50
Roofing Stock			
No. 1	.95	@	1.00
No. 2	.75	@	.80
No. 3	.60	@	.65

Foreign Rags
(F. o. b. Boston)

Dark Cottons	1.00	@	1.10
New White Shirt Cuttings	5.50	@	6.00
Dutch Blues	2.00	@	2.50
New Checks & Blues	2.50	@	3.00
Old Fustians	1.55	@	1.60
Old Linsey Garments	1.25	@	1.35

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.10¼	@	—
No. 2 Sulphite	.08½	@	—
No. 1 Colored	.10¼	@	—
No. 2 Colored	.09	@	.10
Ledgers (sulphite)			
Ledgers, No. 1	.34½	@	—
Ledgers, No. 2	.25½	@	—
Writing	.09	@	.09½
Book—			
No. 1 M. F. (Carloads)	6.20	@	—
No. 3 M. F. (Carloads)	5.70	@	—
No. 4 M. F. (carloads)	4.75	@	—
No. 1 S. C. (carloads)	6.65	@	—
No. 3 S. C. (carloads)	6.20	@	—
No. 4 S. C. (carloads)	5.20	@	—
No. 1 Coated and Litho	12.00	@	—
No. 2 Coated and Litho	10.50	@	—
No. 3 Coated and Litho	9.50	@	—
Coated tinted	14.00	@	—
Wrapping—			
Rag Brown	4.25	@	—
White Wrap	2.22½	@	—
"B" Manila	4.75	@	—
No. 1 Manila	5.25	@	—
Fiber	5.25	@	—
Kraft, M. F.	5.75	@	—
Kraft No. 2	5.25	@	—

(F.O.B. Cars Toronto)

News, per ton—			
Rolls (contract)	45.50	@	—
Sheets	50.50	@	—

Pulp
(F. o. b. Mill)

Ground Wood	18.00	@	20.00
Sulphite easy bleaching	40.00	@	—
Sulphite, news grade	38.00	@	—
Sulphite, bleached	50.00	@	55.00
Sulphate	50.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	2.00	@	2.30
Soft White	1.60	@	1.90
White Blk. News	1.25	@	1.40
Book and Ledger—			
Flat Magazine and Book Stock (old)	.90	@	1.00
Light and Crumpled Book Stock	.80	@	.90
Ledgers and Writings	1.00	@	1.05
Manilas—			
New Manila Cut	1.25	@	1.50
Printed Manilas	.70	@	.80
Kraft	1.25	@	1.30
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.60	@	—
No. 1 Mixed Paper	.50	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.06	@	.06¼
Fancy Shirt Cuttings	.02¼	@	.02½

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MONTAGUE MACHINE COMPANY

Turners Falls, Mass.

PAPER TRADE JOURNAL

ESTABLISHED 1872

SIXTY-SECOND YEAR

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

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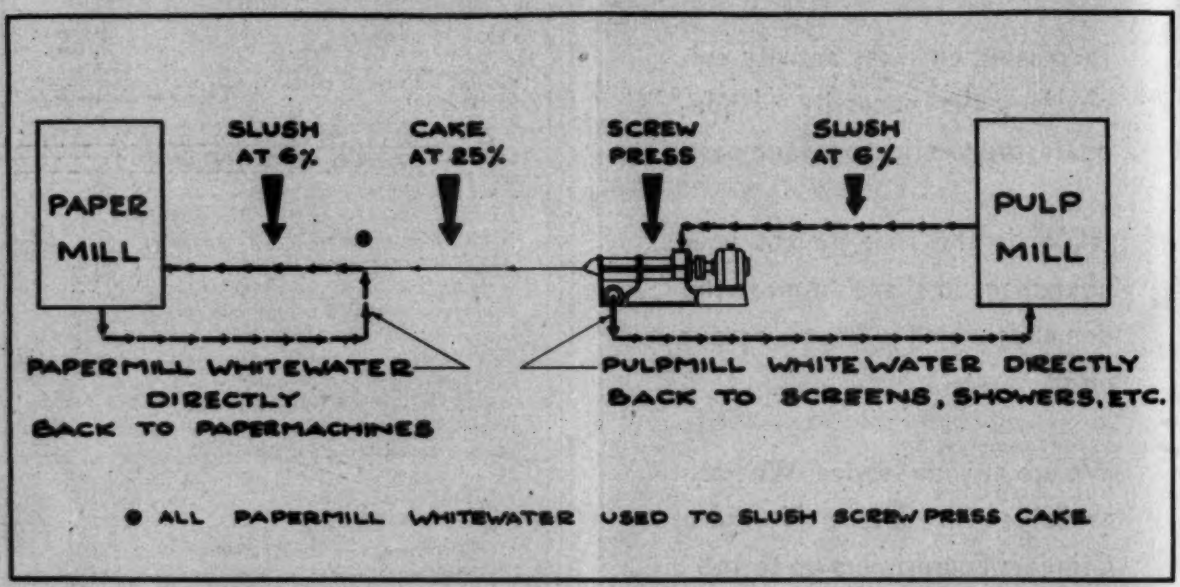
A SCREW PRESS

• Between Pulp Mill and Paper Mill •

will close both white water systems without clarification


SLUSH AT 6%
CAKE AT 25%
SCREW PRESS
SLUSH AT 6%
PAPER MILL
PULP MILL
PAPERMILL WHITEWATER DIRECTLY BACK TO PAPERMACHINES
PULPMILL WHITEWATER DIRECTLY BACK TO SCREENS, SHOWERS, ETC.
• ALL PAPERMILL WHITEWATER USED TO SLUSH SCREW PRESS CAKE

● The above layout is saving $40.00 a day in one Paper Mill. ● Note how the Paper Mill white water is immediately reused. ● It goes right back to the paper machine from which it came. ● Color, clay, size and alum are continuously reused . . . without putting the white water over a saveall first. ● Why not investigate this?

SOME OTHER SCREW PRESS APPLICATIONS:

Dewatering Pulp Mill Screenings for Fuel
Pulp Blowing Systems ● High Density Bleaching ● Beater Furnishing
High Consistency Fibre Processes

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